

# Development of a Synergy Audit Model for Sustainability of Horizontal Airline Alliances



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## Declaration

I, the undersigned, hereby declare that the work contained in this dissertation is my own original work and that I have not previously in its entirety or in part submitted it at any university for a degree.

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## Abstract

For more than a decade there has been an economic need to mitigate the negative effects of the air transport industry's innate sensitivity to cyclical developments as well as the effects of its inherent lack of substantial profits. The past 20 years were additionally marked by a change in policy that prompted various countries to liberalise and privatise their civil passenger air transportation industry. At the same time, airlines' business ambitions became more global, tapping into markets beyond countries' or continents' main gateways. All three aspects started to change the pattern of airline competition and required new business models.

Key features of airlines' novel business models are geographic expansion and thus market development. Global expansion strategies and market development activities in passenger air transportation are, however, not easily and fluidly executable. The airline industry is, to some extent, still nationally regulated, thus impeding passenger airlines from fully participating in the global market-scene and from freely entering promising geographies. Concomitantly, the competitive landscape in which scheduled passenger airlines operate changed drastically, with travel value chains occasionally undergoing revolutionary transformations on both the supply and the demand side. Finally, the air transport service reveals several peculiarities that impact its production, distribution and consummation. These characteristics have inspired the execution of novel forms of competitive strategies that are described and critically discussed in this dissertation.

Within this context, a main root cause for passenger airline partnerships appears to be its continued regulation and the circumvention thereof through the horizontal joining of forces, thus emulating concentration tendencies that have long been a fixture in other globalising industries. Consequently, horizontal interairline partnerships were induced and identified as a key competitive device with which to weather the challenges of the new air transport rivalry structures, the increasingly deregulated environment, and the impediments of sustained market regulation.

All major airlines are now involved in some type of horizontal collaboration. The spectrum of these linkages is wide and ranges from loose, unattached, operative agreements to long-term, far-reaching, strategic ones, the most salient forms and instruments of which are thoroughly scrutinised in this dissertation. This dissertation additionally presents the general core inducing economic drivers of carrier interrelationship, which are cost reduction, revenue generation and corporate power considerations. While these aspects offer a multitude of



possible partnership forms and instruments, the bulk of airline linkages, however, is presently constituted of joint revenue generation and, consequently, jointly pursued marketing and market expansion goals. In view of these causes, the present dissertation engages in a profound discussion of the rationales behind interairline partnerships, their likely evolution and effects on management practice.

Essentially, the key importance of airline partnerships in meeting basic economic imperatives on the one hand, while circumventing persistent regulation on the other, questions the sustainability of incumbent carriers' current business models. There are clear indications that a structured sequence of events in establishing interairline linkages is a key success factor for horizontal airline partnerships. However, the empirical examination of contemporary partnerships' governance structures and managerial practice strongly points to a lack of ample tools with which to establish airline partnerships, select the appropriate match between alliance goals and intensity, and govern alliances during their entire life-cycles. This drawback seems particularly unacceptable in view of the urgent requirement for more appropriate managerial practice in today's discontinuous air transport business environment, and speaks loudly of the need for a framework with which to enhance airline partnership output. Most ideally, a coherent, structured sequence of events should be followed in partnership formation, organisational set-up and management in order to bring an alliance to fruition.

On this basis, the establishment of a collaboration governance organisation, adequately mirroring the specific partnership type and meeting the specific demands of all partners involved, is equally identified and described as a fundamental success driver in this dissertation. Further structural, organisational and functional issues thereafter need to be considered in order to transform the joint business venture of two horizontally allied carriers into a venture for mutual success. The most essential of these are introduced in this dissertation.

Synergy plays a central role in this context. Synergy, as the overreaching intention and result of working together towards a common goal, must be anchored as a prime objective of all forms of partnership activities. Synergy through interfirm linkages can be derived from various collaborative areas and is greatly influenced by both internal and external factors. One gauge for synergy, in particular for the transformation of synergy potentials into synergy effects, is partnership intensity. The measurement of partnership intensity can be used to perpetually monitor the benefits of partnership activities. At the same time, inconsistent or



uneven partnership intensity can indicate the existence of dissynergies or frailties in the alliance. The underlying theories of collaborative synergy generation, its main drivers and impediments, with particular reference to horizontal partnerships of scheduled passenger airlines, are explored in this dissertation.

In recognition of the theoretical and practical background of airline partnerships and the acknowledged problems associated with their establishment and operation, the present dissertation proposes a novel model dynamically supporting the quest for synergy in airline interrelationships. Incorporating the goals of synergy generation and its continual measurement in interairline partnerships, the synergy audit is designed as a dynamic managerial tool. The synergy audit functions as a recurring device for unleashing all the positive partnership benefits of collaborative scope and width. It aids airline alliance management in transforming the desired benefits of partnership activities - synergy potentials - into real, tangible synergy effects during the entire partnership life cycle. The tool A.PIE (Airline Partnership Intensity Evaluator) supports the synergy audit and, which idiosyncratic to the airline industry, multidimensionally applies the deduced relationship of partnership intensity and synergy to the most salient partnership areas and functions.

The present dissertation shapes understanding of the true drivers and complexities of today's airline partnerships. It proposes a circular, multidimensional and dynamic model, thus attempting to enhance the set-up, performance and output of horizontal airline collaboration. From this point of view it endeavours to fill the gap identified in contemporary airline partnership management and practice.

## Opsomming

Vir meer as 'n dekade al is daar 'n ekonomiese behoefte om die negatiewe effekte van die lugvervoerdiens se inherente sensitiwiteit ten opsigte van sikliese ontwikkelinge asook die effekte van sy inherente profytgebrek te verminder. Die afgelope 20 jaar is ook gekenmerk deur 'n beleidsverandering wat verskeie lande beweeg het om hul burgerlike lugvervoerindustrie van passasiers vry te stel en te privatiseer. Samevallend hiermee het lugrederye se besigheidsambisies meer globaal geraak en markte ver buite lande of kontinente se hoofpoorte ontgin. Al drie hierdie aspekte het die patroon van lugdienste se kompetisie begin verander en het nuwe besigheidsmodelle vereis.

Sleuteleienskappe van lugrederye se unieke besigheidsmodelle is geografiese uitbreiding en dus markontwikkeling. Globale uitbreidingsstrategieë and markontwikkelingsaktiwiteite in die passasierslugdienste is egter nie maklik en soepel uitvoerbaar nie. In 'n sekere mate word die lugvervoerindustrie steeds op 'n nasionale vlak gereuleer, wat die passasierslugrederye dus van volle deelname in die globale markomgewing en van die vrye toetreding tot belowende wêrelddele weerhou. Aanvullend hiertoe het die mededingingsomgewing waarin geskeduleerde passasierslugdienste funksioneer, drasties verander en het reis-waardekettings soms revolusionêre transformasies op beide die aanbod- en aanvraagkant ondergaan. Laastens openbaar die lugvervoerdienste verskeie eienaardighede wat 'n invloed het op die produksie, distribusie en uitvoering daarvan. Hierdie aspekte het die uitvoering van unieke vorms van kompetisiestrategieë geïnspireer wat in hierdie proefskrif beskryf en krities bespreek word.

Binne hierdie konteks blyk 'n hoof en kern beweegrede vir passasierslugdiensvennootskappe die volgehoue regulasie en die omseiling daarvan deur die horisontale verbinding van kragte te wees, in navolging dus van die konsentrasietendense wat al lank in ander globaliserende industrieë voorkom. Gevolglik is horisontale onderlinge lugdiensvennootskappe onderneem en geïdentifiseer as 'n sleutelmededingingsmiddel waarmee die uitdagings van die nuwe lugvervoerwedyweringstrukture, die toenemende dereguleerde omgewing en die hindernisse van volgehou markregulasie aangepak kon word.

Alle belangrike lugrederye is tans in een of ander tipe horisontale samewerking betrokke. Die spektrum van hierdie skakeling is wyd en strek van los, ongebonde, werksooreenkomste tot langtermyn, verreikende en strategiese ooreenkomste waarvan die mees kenmerkende vorms en instrumente deeglik in hierdie proefskrif ondersoek word. Daarbenewens presenteer hierdie proefskrif die algemeen belangrikste ekonomiese redes vir onderlinge vervoerverhoudings wat kostevermindering, inkomstegenerering en koöperatiewe magsoorwegings is. Terwyl



hierdie aspekte 'n groot hoeveelheid moontlike vennootskapsvorms en -instrumente bied, bestaan die grootste gedeelte van lugdiensskakelings tans egter uit gesamentlike inkomstegenerering en, gevolglik, die gesamentlike strewe na mark en markuitbreidingsdoelstellings. In die lig van hierdie redes, onderneem die huidige proefskrif 'n deeglike bespreking van die beweegredes agter onderlinge lugdiensvennootskappe, hul waarskynlike verloop en hul uitwerking op bestuurspraktyk.

Wesenlik lê die sleutelbelang van lugrederyvennootskappe in, aan die een hand, die voldoening aan basiese ekonomiese verpligtinge terwyl dit, aan die ander kant, blywende regulasies omseil, die bevraagtekening van die lewensvatbaarheid van bestaande lugdienste se huidige besigheidsmodelle. Daar is duidelike aanduidings dat 'n gestruktureerde opeenvolging van gebeure in die vestiging van onderlinge lugdiensskakelings, 'n sleutelsuksesfaktor vir horisontale lugdiensvennootskappe is. Die empiriese ondersoek van hedendaagse vennootskapbestuur en -bestuurspraktyk dui sterk op 'n gebrek aan voldoende instrumente waarmee lugdiensvennootskappe gevestig, die toepaslike koppeling tussen bondgenootskapdoelstellings en -intensiteit gekies en bondegenootskappe tydens hul volledige lewensduur bestuur kan word. Hierdie nadeel blyk spesifiek onaanvaarbaar in die lig van die dringende behoefte aan meer toepaslike bestuurspraktyk in die hedendaagse onreëlmatige vervoerbesigheidsomgewing en spreek duidelik oor die behoefte aan 'n raamwerk om die lugrederyvennootskap se prestasie te verbeter. In die gunstigste geval sou 'n samehangende, gestruktureerde opeenvolging van gebeure in vennootskapvorming, organisatoriese vestiging en bestuur gevolg word om 'n bondgenootskap tot vervulling te bring.

Op hierdie basis word in hierdie proefskrif die formasie van 'n samewerkingbestuurs-organisasie wat die spesifieke vennootskapstipe weerspieël en wat aan die spesifieke vereistes van alle betrokke vennote voldoen, beide as 'n fundamentele dryfveer vir sukses geïdentifiseer en beskryf. Verdere strukturele, organisatoriese en funksionele kwessies moet daarna ondersoek word om die gesamentlike besigheidsonderneming van twee horisontaal verbonde lugvaartmaatskappye in 'n onderneming vir wederkerige sukses te transformeer. Die mees wesenlike van hierdie word in hierdie proefskrif bekendgestel.

In hierdie konteks speel sinergie 'n belangrike rol. Sinergie as die uiteindelijke bedoeling en resultaat van samewerking tot 'n gemeenskaplike doeleinde, moet as 'n primêre doelstelling van alle vorme van vennootskaplike aktiwiteite geanker wees. Sinergie deur onderlinge maatskappyskakelings kan van verskeie samewerkingsareas afgelei word en word beduidend



deur beide interne en eksterne faktore beïnvloed. Een maatstaf vir sinergie, spesifiek vir die transformasie van sinergiepotensiaal in sinergie-effekte, is vennootskapsintensiteit. Die meting van vennootskapsintensiteit kan gebruik word om die voordele van vennootskapsaktiwiteite voortdurend te monitor. Gelyktydig, kan inkonsekwente of ongelyke vennootskapsintensiteit die bestaan van dissinergieë of swakhede in die bondgenootskap aandui. Die onderliggende teorieë van die generering van samewerkingsinergie, die belangrikste dryfvere en hindernisse, met spesifieke verwysing na horisontale vennootskappe van geskeduleerde passasierslugdienste word in hierdie proefskrif ondersoek.

In erkenning van die teoretiese en praktiese agtergrond van lugrederyvennootskappe en die erkende probleme wat met hul vorming en funksionering geassosieer word, stel die huidige proefskrif 'n unieke model voor wat die soektog na sinergie in onderlinge lugdiensverhoudings dinamies ondersteun. Die sinergie-oudit, wat die doelstellings van sinergiegenerering en die voortdurende meting in onderlinge lugdiensvennootskappe bevat, is as 'n dinamiese bestuursinstrument ontwerp. Die sinergie-oudit funksioneer as 'n terugkerende middel om al die positiewe vennootskapsvoordele van samewerkingsdraagwydte en -reikwydte vry te stel. Dit help lugdiensbondgenootskapbestuur om die gewenste voordele van vennootskapsaktiwiteite - sinergiepotensiaal - in egte, tasbare sinergie-effekte tydens die hele vennootskapslewensiklus te transformeer. Die instrument A.PIE (Airline Partnership Intensity Evaluator) ondersteun die sinergie-oudit en, eie aan die lugdiensindustrie, pas dit die afgeleide verhouding van vennootskapsintensiteit en -sinergie multidimensioneel op die mees kenmerkende vennootskapsareas en -funksies toe.

Hierdie proefskrif gee vorm aan die begrip van die ware dryfvere en kompleksiteite van die hedendaagse lugrederyvennootskappe. Dit stel 'n sirkelvormige, multidimensionele en dinamiese model voor en probeer dus die opstelling, uitvoering en resultaat van horisontale lugdienssamewerking te verbeter. Vanaf hierdie gesigspunt probeer dit om die geïdentifiseerde gaping in die hedendaagse lugdiensvennootskapsbestuur en -praktyk te vul.



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## Abbreviations/Glossary

A.PIE	Airline Partnership Intensity Evaluator
AA	American Airlines (Designator)
AEA	Association of European Airlines
ALP	Agency Loyalty Programme
AMS	Amsterdam Schiphol (Designator)
ANA	All Nippon Airways
ASA	Air Service Agreement
ASK	Available Seat Kilometres: the number of seats an airline provides multiplied by the number of kilometres flown; a measure of airline capacity
ASP	Application Service Provision
ATC	Air Traffic Control
B2B	Business-to-Business
B2C	Business-to-Consumer
BA	British Airways P.L.C. (Designator)
CAPM	Capital Asset Pricing Model
CDG	Paris Charles de Gaulle Airport (Designator)
CLP	Corporate Loyalty Programme
CPT	Cape Town International Airport (Designator)
CRM	Customer Relationship Management
CRS	Computer Reservation System
DEM	Deutsche Mark
DOC	Direct Operating Costs
DOT	Department of Transportation (USA)
DVD	Digital Versatile Disc
e.g.	exempli gratia, Latin: for instance, for example
ERP	Enterprise Resource Planning
et al.	et alii/alia, Latin: and others
EU	European Union
EUR	Euro
FAA	Federal Aviation Agency
FFP	Frequent Flyer Programme
FRA	Frankfurt Rhein-Main Airport (Designator)



GAO	United States General Accounting Office
GBP	Great Britain Pounds
GDP	Gross Domestic Product
GDS	Global Distribution System
GSA	General Sales Agency
i.e.	id est, Latin: that is to say
IATA	International Air Transport Association
IATP	International Airlines Technical Pool
ibid.	ibidem, Latin: at the same place
ICAO	International Civil Aviation Organization
IOC	Indirect Operating Costs
IP	Internet Protocol
ISO	International Organization for Standardization
IT	Information Technology
KLM	Koninklijke Luchtvaart Maatschappi (Royal Dutch Airlines)
LH	Deutsche Lufthansa AG (Designator)
LHR	London Heathrow Airport (Designator)
Load Factor	Passenger Revenue Kilometres divided by Available Seat Kilometres
MIDT	Marketing Information Data Tapes
MOC	Memorandum of Consultation
MRO	Maintenance, Repair and Overhaul
MUC	Munich Franz-Josef-Strauß Airport (Designator)
N/A	not applicable, not available; no Author (for List of References)
NATS	National Air Traffic Service (UK)
No.	Number
O&D Traffic	Origin-Destination Traffic
OEM	Original Equipment Manufacturer
p.	Page
PAX	Passenger(s)
PC	Personal Computer
PKM	Passenger Kilometres
POS	Point of Sale
pp.	Pages
R&D	Research and Development

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ROI	Return on Investment: measures how effectively the firm uses its capital to generate profit
RPK	Revenue Passenger Kilometre: the number of passengers multiplied by the number of kilometres they fly
SA	South African Airways (Designator)
SA	South Africa
SAA	South African Airways
SIA	Singapore Airlines
SITA	Société Internationale de Télécommunications Aéronautiques
SPA	Special Prorate Agreement
SR	Swissair (Designator)
TCAA	Transatlantic Common Aviation Area
UMTS	Universal Mobile Telecommunications Systems – fast mobile data transfer standard
US	United States
USA	United States of America
USD	United States Dollar
VBM	Value Based Management
VFR	Visiting Friends and Family (Traffic)
Vol.	Volume
vs.	versus
WACC	Weighted Average Cost of Capital
WAP	Wireless Application Protocol
Yield	Revenue divided by Revenue Passenger Kilometres (RPK): it represents an aggregate of all the airfare and airline charges and is measured on a per kilometre basis
ZAR	South African Rand



# 1 Introduction

## 1.1 Background to the Study

Of all the significant business trends that have marked the past 20<sup>th</sup> century, none seems more important than the emergence of the globalised economy. The development of many industries has been marked by a transformation toward bigger arenas and spreading into regions - formerly unattractive or inaccessible - by way of internal and/or external growth.

Globalisation mandates cross-border business partnerships that, concurrently, become absolutely essential for strategy. The scholarly community has recognised this fact by thoroughly examining interfirm linkages, taking cues from different schools of thought and applying various scientific approaches. While the literature on inter-organisational relationship formation is fragmented, company linkages can be justified from diverse theoretical backgrounds, with several disciplines contributing to the field (see Contractor and Lorange, 1988, Koza and Lewin, 1998, Gomes-Casseres, 1998, Khanna, 1998, Parkhe, 2000, Dyer et al., 2001). The fragmented nature of the research reflects the multifaceted character of inter-organisational relationship formation and governance. A wealth of research has, however, been conducted in the fields of motives, intentions, and objectives of partnership action (for an overview, see Barringer and Harrison, 2000).

A business partnership is commonly defined as any voluntarily initiated collaborative agreement between firms that involves exchange, sharing, or co-development, and it can include contributions by partners offering capital, technology, or firm-specific assets (see Gulati and Singh, 1998). The purpose of such a combined action is to enhance the competitive position of each partner (see Bleeke and Ernst, 1991, Spekman et al., 1998). Currently, interfirm partnerships have become the *conditio sine qua non* for the survival of many companies in the globalised economy. Formal and informal co-operation relating to the production and the diffusion of scientific and technical knowledge, and the creation of technology and services has consequently emerged as a widespread phenomenon (see Hamel et al., 1989).

The growth of international and domestic interfirm agreements represented a significant and novel development in the 1980s (see Perlmutter and Heenan, 1986). In the then hyper-competitive environment, with increasing globalisation and interweaving of national economies, firms faced difficulties in obtaining all the resources needed to develop and



sustain their competitive advantage, while simultaneously trying to build new ones (see Devlin and Bleackley, 1988, Lei and Slocum, 1992, Backhaus and Meyer, 1993, Moss Kanter, 1994, Varadarajan and Cunningham, 1995, Dyer and Singh, 1998, Harrison et al., 2001). New technologies, products, services and know-how were thereafter less and less the result of isolated efforts by the lone inventor, or an individual firm. They were increasingly created, developed, brought to the market and subsequently diffused through complex inter-organisational relationships and linkages. Simultaneously, collaborative arrangements were used as an entry mode by firms seeking to invest in economies adapting to the realities of market-based competition and accommodating the shift towards more consumer power (see Prahalad and Ramaswamy, 2000). Unbound collaborative projects, joint ventures, strategic alliances and various other forms of network relationships gained pace and expanded in size as well as in scope.

In the latter years of the 20<sup>th</sup> century, the term “alliance and merger mania” was created to describe the trend towards the ever-increasing number and size of cross-border collaborations. The merger of Daimler Benz and Chrysler, creating DaimlerChrysler, South African Breweries’ take-overs in Europe and North America, the merging of hardware giants Compaq and Hewlett Packard and media companies AOL and Time Warner, and Vodafone’s aggressive global expansion strategy are just some examples of firms seeking enlarged market exposure and, eventually, leadership by consequently following integration and collaboration strategies.

The airline industry has been a dominant contributor to and emblem of globalisation. Its surging growth, physical and financial availability to an increasing part of the world’s population as well as its technical prowess have shrunk the planet, linking people and markets more closely (see Oum and Taylor, 1995, Hanlon, 1996, Pompel, 1998, Doganis, 2001). Air transport lubricates both trade and foreign investment across borders and facilitates the globalisation of production and distribution systems. By its very nature it is cosmopolitan.

Ironically, however, one of the last industries to fully participate in this onrushing globalisation has been the airline industry itself (see Button, 1997). Although individual carriers have built worldwide route systems, and the trend towards expanding international route structures is an inevitable response to the underlying network economics of the airline sector, they have not kept up with other industries in forming close cross-border business ties (see Ombelet, 2001, Baker, The global Groupings, 2001, Doganis, 2001).



Despite being an increasingly deregulated industry on a national and regional scale, governmental restrictions and limitations set by international air service agreements deter airlines from participating in global concentration (see Lyth, 1996, Thierer, 1998, Turnbull, 1999). Nations generally require airlines based within their borders to be majority-owned and controlled by their own citizens (see Oum et al., 1993, Pompl, 1998). Many countries regard “their” airlines as sacrosanct extensions of the national flag, this viewpoint being fuelled by the desire not to cede control of the country’s airspace. Furthermore, restrictive air service agreements between nations often restrain airlines from operating where and how they want (see Glisson et al., 1996). The airline industry continues to operate according to a national partisan model that has long since been abandoned elsewhere in business.

However, deregulation has generally opened a window of opportunity for airlines (see, e.g., Button, 1996, Niejahr, 1998, Bittlinger, 1998, United States Department of Transportation, International Aviation Developments, Second Report, 2000). With the air transport environment moving progressively from strict regulation to more liberalised markets - although different in each of the major geographies - it is not surprising that collaborations feature strongly in many airlines’ attempts to expand into new markets and to offset country-based disadvantages, while keeping within the remaining limitations regarding access, ownership and control (see Bissessur and Alamdari, 1998, Vander Kraats, 2000, Doganis, 2001). Factoring in the potential economies of scale, scope and density, there is a clear driving force behind interairline co-operation (see Contractor and Lorange, 1988, Gulati, 1988). The likely collaborative benefits to be realised have increased substantially as aviation markets have been liberalised. Without the tight historic constraints on flight frequency and fares, market share gains through network expansion have made interairline partnerships inevitable - if within the confines of continued regulatory impediments.

Currently, every major international airline is tied up in various intercompany co-operations of various kinds for different purposes, reflecting the flexibility and dynamics of the air transport sector and suggesting a certain alliance-sophistication (see Parkhe, 2000, Baker, 2001, Ombelet, 2001). Breaking down the basic motivations for creating alliances to a simple scope, the primary objective is synergy, also in the sense of learning, adding value to an existing transport service in a competitive context and to circumvent continued limitations through regulatory constraints (see Contractor and Lorange, 1988, Kogut, 1989, Hamel, 1991, Varadarajan and Cunningham, 1995, Harrison et al., 2001). In value chain partnerships, airlines with different, but complementary skills link their capabilities and competencies to



create value for the ultimate users (see Moss Kanter, 1994, p. 98). Within this framework, forms of interairline collaborations vary between loose joint marketing agreements, franchise and exchange in equity, or other, closer, configurations of cross-ownership. Further examples of inter-organisational linkages are alliances between passenger carriers and hotel groups, tour operators, travel agencies, or car rental companies vertically collaborating within discrete parts of the travel value chain (see Pompl, 1998). On the other hand, horizontal relationships describe co-operations within the same industry, between enterprises rendering equivalent services, producing or offering identical products and are predominately focused on access to new markets and the extension of route networks, i.e. to gain and distribute more air traffic (see Bronder, 1992, Lutz, 1993). Furthermore, partners expect to take advantage of each other's expertise and technology to achieve and exploit possible areas of synergy. With airlines being highly sensitive to cyclical developments and having immense fixed costs, interairline partnerships are evidently able to redress these constraints (see Tarry, 1999). Consequently, horizontal co-operations, spurred by globalisation, deregulation and continued regulation, are a major and the fastest growing competition tool in the airline industry today.

## 1.2 Research Problems

The above-mentioned exogenous circumstances underscore the reality of alliances and stimulate their formation. There are increasing numbers of airlines entering alliances and thus escalating the levels of involvement in alliances. The most critical issues that surface in connection with interairline partnerships, both in theory and in practice, are the following (see Lorange and Roos, 1991, Bleeke and Ernst, 1991, Bronder and Pritzl, 1991, Dyer et al., 2001 and below):

- The primary motivation for entering into horizontal partnerships based on necessity or choice,
- The managerial and organisational implications of partnership building and governance,
- The instability of interfirm linkages, and
- The realisation of benefits associated with horizontal collaboration.

Primary motivations for entering horizontal partnerships can be diverse, which has instigated academic examination of the paradigms that, in turn, explain why partnerships are formed (see Bleeke and Ernst, 1991, Contractor and Lorange, 1991, Varadarajan and Cunningham, 1995, Spekman et al., 1998, Barringer and Harrison, 2000). Generally, cost, revenue and the circumvention of regulative constraints are mentioned as key motivational drivers for airline



partnerships (see Schmidt, 1993, Piepelow, 1997). Within a set of stimuli for entering interrelationships, the decision to collaborate may, in many cases, be based on *ad hoc* necessity - an effort to ensure the survival of the firm - rather than on choice- as the result of a well thought-through process (see Ensign, 1998). Equally often, a true alliance strategy, clearly formulating partnership objectives, is non-existent (see Gomes-Casseres, 1998, Doganis, 2001). The trend of partnership formation has given rise to a vicious circle - a defensive fear of being left outside an alliance. With an increasing number of carriers teaming up to form bi- or multilateral groupings, the mere pressure to join possibly outweighs a thorough consideration of the partnership implications. The results can leverage the inconstant effects of alliances as business relationships. Research has taken note of this problem, and has generally investigated the reasons for forming alliances.

The basic lesson from all industries is that alliances are inherently unstable, and the airline business is no exception. Issues such as initial partner choice, partnership management and the degree of collaborative accomplishment likely foster instability and have been academically scrutinised (see Lorange and Roos, 1991, Spekman et al., 1998, Khanna, 1998). What is described in the literature on alliances as a careful and time-consuming process of getting to know and “marrying” a partner, paralleled by simultaneous interpersonal relationships, might not necessarily lead to success and create value for all participants (see Moss Kanter, 1994). Partnerships thus need proper conception, set-up and managerial structures (see Bronder and Pritzl, 1991, Gulati and Singh, 1998). In addition, the appropriateness of the partner selection has a critical impact on the alliance's success (see Bucklin and Sengupta, 1993, Dev et al., 1996). Furthermore, the process of selecting alliance partners and groupings is highly influenced by historic relationships and rivalries, perceptions of cultural fit and national pride, as well as strategic advantage (see Lorange and Roos, 1992, Doz, 1996, Dev et al., 1996). However, there are many obstacles in the way before an alliance becomes a partnership with mutual benefits for all parties.

A potentially synergistic relationship does not automatically unleash synergy effects. Exogenous and endogenous obstacles and conflicts lessen the benefits to be had from working together and impact negatively on the value of the co-operation (see Kogut, 1988, Yoshino and Rangan, 1995, Gulati, 1995, Park and Ungson, 1997). The advantages of collaboration are frequently offset by fears about relinquishing brand values and independence (see Gomes-Casseres, 1996, Bernardino and Frankel, 1998, Gulati and Singh, 1998). Using a set of criteria such as self-analysis, chemistry and compatibility might only be one approach towards



structuring crucial internal success factors and identifying possible sources of conflict. The design of the partnership, its managerial structures, power configurations and the portfolio of alliances and its network position can have a profound influence on its overall performance (see Grandori, 1997, Spekman et al., 1998, Dyer et al., 2001).

Partnerships essentially need to produce benefits for the members, and this additional value should, in some form or another, be tangible (see Hamel et al., 1989). There are as many benefit dimensions to the formation of an alliance as there are motives to enter into collaborative ventures (see Varadarajan and Cunningham, 1995, Day, 1995). The body of literature contains substantial research on the different categories of benefits (see Lewis, 1990, Bleeke et al., 1992, Bronder, 1993, Gomes-Casseres, 1996, Dyer, 1997, Osegowitsch, 2001, Dyer et al., 2001). A general claim is that benefits should emerge for all partners and that they should be durable within a sustaining alliance context (see Moss Kanter, 1994, Eisenhardt and Galunic, 2000).

Despite extant academic examination and the obvious importance of partnership strategies, the literature on strategic airline alliances suffers from a number of deficiencies, in particular in the mentioned categories. The current status of scientific research scrutinising alliance formation and management as well as identification and enhancement of synergies can be described as rather rudimentary and lagging far behind current development (see Goold and Campbell, 2000). The following research gaps have been specifically identified in the above-mentioned issues within a passenger airline alliance context:

- Very little comprehensive research has been carried out in the particular field of motivations for horizontal linkages in the passenger airline industry (see e.g. Schmidt, 1993). The existing research makes general economic and qualitative motivations to collaborate applicable to the airline industry without accommodating the specific characteristics of air transportation (see e.g. Piepelow, 1997). In addition, motivations that are regularly alluded to are not critically discussed regarding their sustainability during collaboration. The causality of interairline linkages thus often remains unidentified.
- Existing research largely engages in general examination of the challenges associated with the establishment and management of collaborations. The main deficiencies in research on airline partnership management structures emanate from describing discrete efforts by individual airlines, or applying management expertise from other industries to air transportation (see Klein, 1996, Flores Jr., 1998). In addition, airline-specific research on the dynamics of managerial practices and the impediments that partnerships face, is very



scarce and in most cases only provides snapshot insights, singular case studies, or geographically-confined evidence (see Schmidt, 1993, Oum et al., 1993, Oum, 1995, Park and Zhang, 2000). Questions thus need to be raised regarding the real prerequisites and success factors for airline partnerships and the governance mechanisms able to address all aspects of the relationship as well as those fitting the dynamic nature and evolution of strategic interairline alliances.

- Relatively little has been written in the field of qualitative and quantitative research on the partnership benefits as well as the dimensions of the additional value that interairline linkages create (for existing research see Park and Zhang, 1998, Bissessur and Alamdari, 1998, Howarth and Kirsebom, 2000). The reason for this lack of research may be the complexities associated with quantifying benefits that are influenced by a large number of variables. Generally missing, however, is a model that captures those drivers of benefit generation that suggest the potentiality of synergy and delineate ways of partnership advancement during the partnership's entire life-cycle.

In general scientific literature, the description of airline partnerships, their governance structures and benefits are often limited to a mere exemplary portrayal of carrier linkages among other forms of co-operations in different industries (see Eisenhardt and Galunic, 2000, Parkhe, 2000). A review of literature reveals that conclusions are drawn from general overviews without focusing on one dedicated industry. The consequences are evident. Neglecting to consider industry specifications, research fails to produce value in respect of the practical implementation of its findings. While many literature sources specifically emphasise the airline industry, comprehensive, scientific research dealing with the antecedents, mechanisms and forms of interairline collaboration is rare. A few research projects investigate horizontal airline linkages exclusively (see Jäckel, 1991, Schmidt, 1993, Netzer, 1998, Steininger, 1999, Park and Zhang, 2000). However, this research is often merely descriptive in nature, focused on specific forms of collaborative agreements, or only provides insight into a specific geography. This dissertation attempts to address the above-mentioned shortcomings by suggesting that a great potential in terms of a theoretical contribution resides in conceptually developing collaboration management expertise.

From a more practical perspective, airline partnerships do not produce the benefits they potentially could, which has been empirically proven and is regularly described in management and industry publications (see sources such as *Airline Business*, and *Air Transport World*). This is most often due to unstructured configuration and management



processes, and a lack of skills in detecting and enhancing the value of the collaboration. Starting right from the preparatory phases of the set-up of management structures, airlines often do not fully understand the prerequisites for configuration, or the true beneficial potential thereof. In later stages, carriers have so far failed to implement effective managerial and controlling tools that would help to identify and enhance the gains from their horizontal linkages.

These inadequacies clearly evidence an acute need for a framework for interairline partnership management in order to enhance the conceptual apparatus of airline governance and performance in a theoretically integrated and empirically grounded way. This dissertation is thus an examination of the innate propensities or inducements that lead airlines into alliances, the opportunities and constraints that could influence their behaviour and the governance and advancement of collaboration. This dissertation conceptualises a comprehensive and updated framework of partnership building to identify synergy and thus effectively manage partnerships in the global air transport industry.

### 1.3 Objectives

Set against the aforementioned background and the research problems, the overall objective of this dissertation is to contribute, both theoretically and empirically, to the comprehension of the managerial and organisational challenges associated with effectively establishing and governing interairline partnerships. More specifically, this dissertation has the following related objectives:

#### **The primary objective of this dissertation is to:**

- Develop a managerial model identifying, evaluating and enhancing the benefits of interairline co-operation prior to and in the course of partnerships, called the synergy audit model.

#### **The secondary, supportive, objectives of this dissertation are:**

- To describe the airline industry in its current state, which entails a historical overview, a description of the most important players as well as the developmental drivers, product characteristics and crucial strategic challenges;
- To analyse airline collaboration as a competitive tool in the current air transport environment, its motivations, types and limitations and to outline emerging types of competition, and



- To outline prerequisites for successful airline collaboration based on a sequential evaluation of suitability criteria, partnership managerial skills and configurational structures.

The essence of the contribution lies in presenting a theoretical framework and a managerial toolbox idiosyncratic to the airline industry, optimising set-up, governance and advancement during the entirety of horizontal airline partnerships' life-cycles.

## **1.4 Scope and Delimitation of the Study**

Most research has a delimited scope. This is often due to the manageability of research and its design as well as timing and funding constraints. In addition, the research methodology can require a certain scope, or allow a restricted scope in order to achieve valid and reliable results (see e.g. Weber, 1997, Steininger, 1999 for the airline industry and Martinsuo, 2001). The scope of the present study can be grouped into three domains:

### **Geographical:**

Due to the nature of the airline business and international airline co-operations, the orientation of the study is global. International South African and Central European airlines and their partnership networks form an elementary research platform to facilitate research.

### **Functional:**

Alliances and business partnerships are of particular relevance to a variety of organisational functions and since this study is focused on strategic planning, and marketing and organisational issues, the emphasis of the research is on these functional fields. Strategic planning departments, alliance management and network planning and management, as company functions, are the focal points of an empirically based evaluation.

### **Typological:**

The range of enterprises to be evaluated is strictly limited by the subject of this research. Only airlines operating commercially scheduled passenger services in compliance with IATA (International Air Transport Association) regulations are relevant to the dissertation. Within this group, any form of horizontal intercompany co-operation and relationship falls within the scope of the study. Excluded from the evaluation, however, are wider vertical value chain partnerships, i.e. alliances with service providers, or within the travel experience value chain



(e.g. hotel groups, car rental companies and financial services). Subsequently, when terms such as airline alliance, collaborative airline action or carrier partnership are used, they refer to horizontal airline alliance activities.

## **1.5 Research Methodology**

All research operates within a framework of assumptions and expectations with regard to the subject matter under investigation, the methods employed and the devices that guarantee the research quality. These are mainly ontological and epistemological suppositions underpinning the chosen research methods. Ontology describes the form and character of reality, its qualities and attributes and how this reality can be comprehended. Ontologically, the present dissertation endeavours to understand and explicate the realities of airline partnerships in the context of the wider air transport industry. Epistemology studies the nature of knowledge itself, its presuppositions and foundations, its extent and validity. Epistemology concerns itself with the relationship between the knower and what can be known; and how one might begin to understand the world and communicate this as knowledge (see Burrell and Morgan, 1979, Guba and Lincoln, 1985). Epistemologically, the dissertation builds knowledge by neutrally examining the passenger airline industry and its horizontal partnerships, and by applying and further elucidating, probing and advancing current research streams in this field. The dissertation conveys expertise, thus contributing to the body of knowledge by providing guidelines for airline partnership formation and advancement and, by means of developing a model, detecting and enhancing interairline partnership synergies.

The chosen research methods entail the principles and procedures of inquiry in a particular discipline. This study has been conducted by investigating primary and secondary sources of information. The research tools utilised in this investigation comprise a set of semi-structured personal interviews, together with a detailed review of secondary literature and data.

### **Primary Sources**

A survey of a number of airlines was conducted to provide initial knowledge of the business patterns of passenger carriers in bi- and multilateral horizontal collaborations. In this context, interviews are generally regarded as the single most important data collecting technique in social science (see e.g. Yin, 1994). In line with this thought, primary data was collected by the researcher himself through semi-structured, extensive managerial discussions with senior management staff (for a sample questionnaire, see the appendix and for questionnaire design, see Oppenheim, 1992, Webb, 2000). The interview guidelines were designed in a



questionnaire format to obtain relevant information on sources of motivations for collaboration, partnership managerial structures, and key success factors of collaboration, synergy potentials and effects. The questionnaire design followed scholarly principles, and textually as well as content-wise was compiled with the aid of the dissertation's supervisor and industry experts from airlines, governmental bodies and suppliers to the air transport industry. In a subsequent stage, the questionnaires were pre-tested with selected trial interviewees and further refined regarding content and structure. The empirical research emphasised areas such as strategic planning, corporate development, local general management and alliance management, since the most appropriate responses to the research question were expected to be gathered in these functional areas. The sample included in the primary research comprised the carriers listed below. The group of interviewees was judgementally selected in close collaboration with the dissertation's supervisor and based on recommendations by industry specialists from selected airlines' top management, AASA (Airlines Association of Southern Africa) and AIRBUS Industries.

The sample size and its functional and organisational composition are regarded as representative for the dissertation's purpose. A more comprehensive primary empirical study was neither necessary nor feasible for the dissertation's research intent. The airline industry is a volatile business sector, which is particularly reflected by the constant emergence, disappearance and varying types of interairline collaborations. The period 2000-2002 specifically was characterised by changes in alliance compositions and in the business environment, which were further accentuated by the events of September 11<sup>th</sup>, 2001 and its aftermath. The evident lack of a model to detect and enhance airline partnership performance on the basis of synergy considerations has further rendered more intensive empirical research obsolete. In addition, the often intangible nature of important airline resources and information on partnership management, made the approach of geographically limited and semi-structured empirical research an appropriate means by which to gather relevant empirical data and expertise for the purpose of developing a managerial tool. This scientific research concept is widely accepted as a suitable instrument for theory building (see Perry, 2001). A nested field-based study of the present type has furthermore been repeatedly used for the airline and other industries by various authors (see e.g. Schmidt, 1993, Doz, 1996, Wilson and Vlosky, 1997, Weber, 1997, Steininger, 1999, Netzer, 1999).

In most cases, both carriers involved in bilateral partnerships were questioned regarding details of their collaboration to ensure adequate data collection. This approach aims at

obtaining a comprehensive picture in order to sufficiently evaluate the entire collaboration dyad (see also Schmidt, 1993). In some cases, follow-up interviews were conducted to achieve internal consistency (see below for reliability). The size of the sample, i.e. the number of interviewees, was 19. Interairline partnerships and alliance network microcosms judgementally selected as primary sources were:

- International/global alliances:
  - South African Airways (SAA) - Air Namibia
  - SAA - Lufthansa German Airlines
  - SAA - Cathay Pacific
  - SAA - Thai Airways
  - SAA - Emirates
  - SAA - Swissair
  - Swissair - Sabena
  - British Airways - American Airlines
  - SAA - American Airlines
- Regional and domestic alliances:
  - SAA - SA Express
  - Virgin Atlantic Airways - Sunair
  - KLM Royal Dutch - Sunair
  - Austrian Airlines - Nationwide Air
  - British Airways - British Airways Comair
  - Swissair/Sabena - Nationwide Air

Due to the relatively small sample size, a statistical - thus quantitative - presentation of the findings was not feasible. The results drawn from the primary research are mainly qualitatively embedded into the chapters dealing with airline collaboration, prerequisites and success factors and the synergy audit model. A supporting tool of the synergy audit model, the airline partnership intensity evaluator (A.PIE), is additionally founded on a further round of intensive discussions with scholars and selected airline executives of the above-mentioned sample. These discussions were mainly held in order to validate salient functions and areas as well as other partnership components, in which the closeness of the collaboration plays an important role in the process of interfirm synergy generation.



## Secondary Research

A further element in the research process is desk research, which scrutinises classic business science and management literature. In this case, secondary research included the extensive study of relevant international literature - mostly Anglo-American and German - on alliances, alliance management and marketing, as well as readings on synergy and entrepreneurial conflict. Within this framework particular emphasis was placed on literature concerning transport services and airline management. In addition, secondary, cross-sectional case study research was conducted in order to build an airline partnership management theory (see e.g. Eisenhardt, 1989, Parkhe, 1993, Yin, 1994, Perry, 1998). The case study research method therefore involves multiple forms of data collection, such as documentation, archival records, conversational evidence, direct observation and physical artefacts (see Yin, 1981, Chetty, 1996, Perry, 2001 and discussion by Dyer and Wilkins, 1991).

Due to the rate of alliance formation and dissolution, the sometimes loose and informal ties between carriers, as well as the flux in the regulatory environment, classic business science literature might not appropriately reflect all developments. This necessitated further information, which was gathered by intensively studying airline management literature, institutional publications, governmental and non-governmental organisations, research institutions and profit-oriented players in the airline industry, as well as through anecdotal data. Among others, secondary data originate from:

- AEA (Association of European Airlines)
- AIRBUS Industries
- AASA (Airlines Association of Southern Africa)
- BARIG (Board of International Airline Representatives in Germany)
- BARSA (Board of Airline Representatives of South Africa)
- BOEING Commercial Aircraft Group
- IATA (International Air Transport Association)
- ICAO (International Civil Aviation Organization)
- Governmental publications
- Newspapers and magazines, in particular Airline Business and Air Transport World
- Publications and research by consulting firms
- Conference papers
- In-house publications, annual reports and statistical data from airline alliances and networks



Considering the international orientation of the study, the location of international airlines' head offices, and the fast moving nature of the business, an elementary means of collecting data for secondary research was the Internet. The Internet provides a wealth of resources, such as newsletters, data bases, archival sources as well as online publications covering airline topics.

### **Methodological Tools**

With the research sources having been described, it remains to introduce the epistemological framework, or elementary method of conducting research. Very basically, there are two major approaches to theory development: deductive theory testing or inductive theory building (see Parkhe, 1993, Perry, 1998).

Deductive research involves the testing of existing knowledge, represented by general theories, against particular cases. This is done by formulating a hypothesis derived from existing knowledge, which is then tested against a particular case. The research thus descends from the general to the particular, from the abstract to the empirical. In this sense, deductive methods often involve a comparative analysis and always lead either to the modification or confirmation of existing theory (see Mintzberg, 1979, Parkhe, 1993).

Inductive research works in precisely the opposite direction, moving from the empirical to the abstract, from the particular to the general - thus not necessarily requiring a pre-formulated hypothesis. The notion is to assemble an explanation from the empirical material itself. Like deductive research, inductive research can also be comparative but is usually focused upon specific cases and is initially interested in their unique qualities. It does not involve the testing of general theories against cases, but rather examines the material on its own terms. For this reason, the inductive method is considered appropriate for producing new ways of understanding and new-fashioned perspectives (see Mintzberg, 1979, Eisenhardt, 1989, Perry, 1998).

Another significant division in research is between quantitative and qualitative methodological tools. While this demarcation should not be strictly aligned with that between deductive and inductive research, quantitative research is typically deductive in practice and qualitative research is characteristically inductive (see Perry, 1998). Quantitative research is modelled on scientific methods and, hence, seeks to explain the research objective by testing what are considered scientifically deduced theories against quantitatively measurable



phenomena. Existing theory thus provides a superior explanation of objective reality. Conversely, qualitative research concentrates upon the contextual meanings people or organisations use to make sense of their immediate experiences (see e.g. Carson et al., 2001). Furthermore, qualitative research is primarily based on a non-numerical examination and interpretation of observation for the purpose of discovering underlying meanings and relationship patterns (see Babbie, 1983). In this respect, qualitative research gathers its interpretations from data that are, in turn, based on reasonable expertise, but without the heavy reliance on existing knowledge. Qualitative research typically focuses upon narratives that groups and individuals use to express and define their identities as well as focusing on anecdotal data. The tracking down of consistencies and patterns, in particular from anecdotes, and the creative leap to describe something new is a key feature of inductive, qualitative research (see Mintzberg, 1979).

Because of the nature of collaborative strategy and research, objectives cannot easily be framed within a single fixed paradigm. Hence, partnership management is necessarily a multi-paradigmatic discipline, requiring varied theoretical perspectives and research methodologies (see Barringer and Harrison, 2000). As such, the quality of this research and its ability to provide answers to critical airline collaboration strategy questions take on a new urgency within the highly dynamic air transport competitive landscape. The research objective and context thus dictate the choice of appropriate research methods.

This dissertation has an inductive focus, and consequently builds its theory upon the studies of both primary and secondary data without explicitly hypothesising. However, to a certain extent theory testing - thus deductive approaches - also forms part of the evaluation, as only the interplay between the two extremes lead to theory advancement (see Parkhe, 1993). The dissertation largely bases its findings on qualitative data, although quantitative sources too assist in achieving the research objectives. It is widely accepted that the integration of quantitative and qualitative methodological tools is likely to be a fruitful course in building models, performing analysis and developing theories (see Hoskisson et al., 1999). In all likelihood, results obtained from different methods have the potential to enrich the understanding of the problems and generate new insights regarding the issues.

### **Quality Measures for the Research Methodology**

Five measures are generally applied to ensure the quality of scientific research and have therefore been adopted for this dissertation:



Firstly, construct or concept validity essentially describes the degree to which a study investigates what it claims to investigate, i.e. it seeks agreement between a theoretical concept and a specific measuring device or research procedure (see Yin, 1994). Multiple primary and secondary sources have been extensively used to research airline alliance set-ups and operations and in order to develop a managerial tool for their sustainability. The dissertation therefore follows a clear sequence of structural components from first discussing and introducing the environment and drivers of airline collaboration to finally designing a synergy audit model. Cross checking of information through multiple sources of evidence can thus provide various explanations for the same phenomenon, corroborating the chosen methods. Construct validity is additionally substantiated by triangulation, which refers to the collective use of qualitative and quantitative research to study the same object (see Yin, 1994, Scandura and Williams, 2000). In this way, this dissertation endeavours to achieve construct validity by utilising a range of different multidimensional and multidisciplinary sources that contribute to the scrutinization of the field of interairline partnerships.

Secondly, internal, or logic validity refers to the decision that a research's procedures are sufficient to justify rejection or acceptance of a hypothesis or the phenomenon in question (see Yin, 1994). Internal validity is mainly concerned with causality, in particular in the analysing phase of research. A cause-and-effect relationship, therefore, can only be asserted if there is a true co-variation between the variables under investigation and additionally presupposes that the causes precede the effects, as in laboratory experiments (see Scandura and Williams, 2000). To a certain extent, the internal validity of this dissertation can be affirmed by the theoretical basis of the synergy audit model, which states that collaborative benefits increase with the intensity of the partnership. A cause-effect relationship between a source (intensity) and an effect (synergy) is thus given. However, in this dissertation it is mainly the results of the secondary objectives that are insufficiently internally valid. Although the findings provide very significant aid in structuring and governing interairline partnerships, they cannot be based on clear causalities.

Thirdly, external validity describes the extent to which the research findings can be generalised, thus reproduced across other times, settings and by other individuals (see Scandura and Williams, 2000). Generalizability is therefore highly dependent on the chosen study approach (see Mintzberg, 1979, Smith et al., 1996). While much research endeavours to describe economic and managerial phenomena from a supra-industry perspective aimed at generalised solutions and universally applicable models (see e.g. Porter, 1980, Lorange and



Roos, 1991), the present study uses an industry-specific approach. The chosen research approach, moreover, mandates that empirical and secondary studies take place in a certain time frame, in a geographically limited terrain and by questioning a specific sample of respondents. The findings of this research are idiosyncratic to the industry researched, and consequently only apply to the airline industry and horizontally allied scheduled passenger carriers. Accordingly, and also in view of the fact that empirical research is not easily reproducible, this research does not claim full external validity across industry boundaries (for an example of cross-industry validity, see Smith et al., 1996). However, in as far as the developed model and the tools it applies are concerned, generalizability can be claimed for the auditing process of scheduled carriers. The model is highly workable within other horizontal airline partnerships within the delimitation of this research.

Fourthly, content validity describes the degree to which the test items represent the learning material. Content validity is measured according to the extent to which a test adequately samples the domain of the information, knowledge or skill that it purports to measure (see Sireci, 1998). This is why, classically, content validity is primarily determined by expert judgement. Content validity of this dissertation is assured by the informed item selection made by experts (the supervisor and industry experts) in the airline industry domain. More specifically, domain specifications and questionnaire items in this research were reviewed by the mentioned panel of experts, during which they judged that the test items possessed content validity.

Fifthly, reliability describes the degree to which the study is free of random errors and is therefore a methodological requirement for the process of data collection as well as the analysis and synthesis of the research's results (see Yin, 1994). In this research, the process of data collection itself can be claimed as being reliable, since the combination of primary, empirical and secondary research is a widely accepted practice in social and business management science (see Barringer and Harrison, 2000, Scandura and Williams, 2000). The content of the empirical research is based on the most important aspects of alliance formation and management, direct input by knowledgeable industry specialists and the dissertation's supervisor. In addition, the interview partners approved the choice of interview categories, which supported internal consistency as a measure of reliability. Internal consistency therefore relates to whether tests assess the same characteristics and determine the homogeneity of items (see Henson, 2001). The results of the interviews were furthermore also analysed for internal consistencies (see also Steininger, 1999). The analysis concluded that the



findings of the empirical research all point in the same direction. In some minor points there were, however, divergences of opinion. In these cases, follow-up interviews were conducted so that full internal consistency could be achieved. Reliability of both the chosen research methodology as well as of the results of the finding can thus be attested.

Applying the five mentioned quality measures (construct, internal, external and content validity as well as reliability) in data collection, analysis and synthesis will advocate that empirically-based and theoretically-grounded quality results can be produced.

## 1.6 Structure of the Dissertation

The dissertation follows a traditional, inductive structural set-up. For expository purposes, this dissertation has been structured in a total of 7 text chapters.

**Chapter 2** and **3** aim at giving background information of air transportation, and most importantly seek to introduce the main drivers of airline development and the underlying reasons for the formation of interairline partnerships.

**Chapter 2** starts with a portrayal of the various forms of air transportation and its current quantitative status. Its focus, however, lies on the historic development of the global airline industry and, in particular, on the influences of the industry regulation and deregulation in Europe and the USA.

Since the airline industry is embedded in a web of stakeholders, interest groups and market partners and is exposed to a highly competitive environment, **chapter 3** provides an overview of the discrete influences developing from these arenas. Airlines provide their transport services in network formats that link markets through different structural configurations, which greatly affect the carriers' business performances. In order to gain an understanding of the particular characteristics of air transport products, a part of **chapter 3** provides a description and a discussion of passengers' demand structures and airlines' corresponding product designs, sales activities and loyalty schemes.

**Chapter 4** entails a detailed description of airline collaboration as a competitive tool. Initially, business partnerships are defined and a taxonomy is delineated. Incentives for airlines to enter into horizontal alliances are discussed, using the broad motivational categories of cost, market and revenue-oriented considerations as a guideline. While different motivational as well as varying corporate backgrounds lead to various forms of interairline partnerships, the most prevalent are described, mainly distinguishing between operative,



strategic and hybrid partnership forms and instruments. Although airline partnerships are the main competitive driver in the airline industry today, they do not occur without criticism from consumer advocates, national bodies and from within the industry. This critique is analysed in its leading categories.

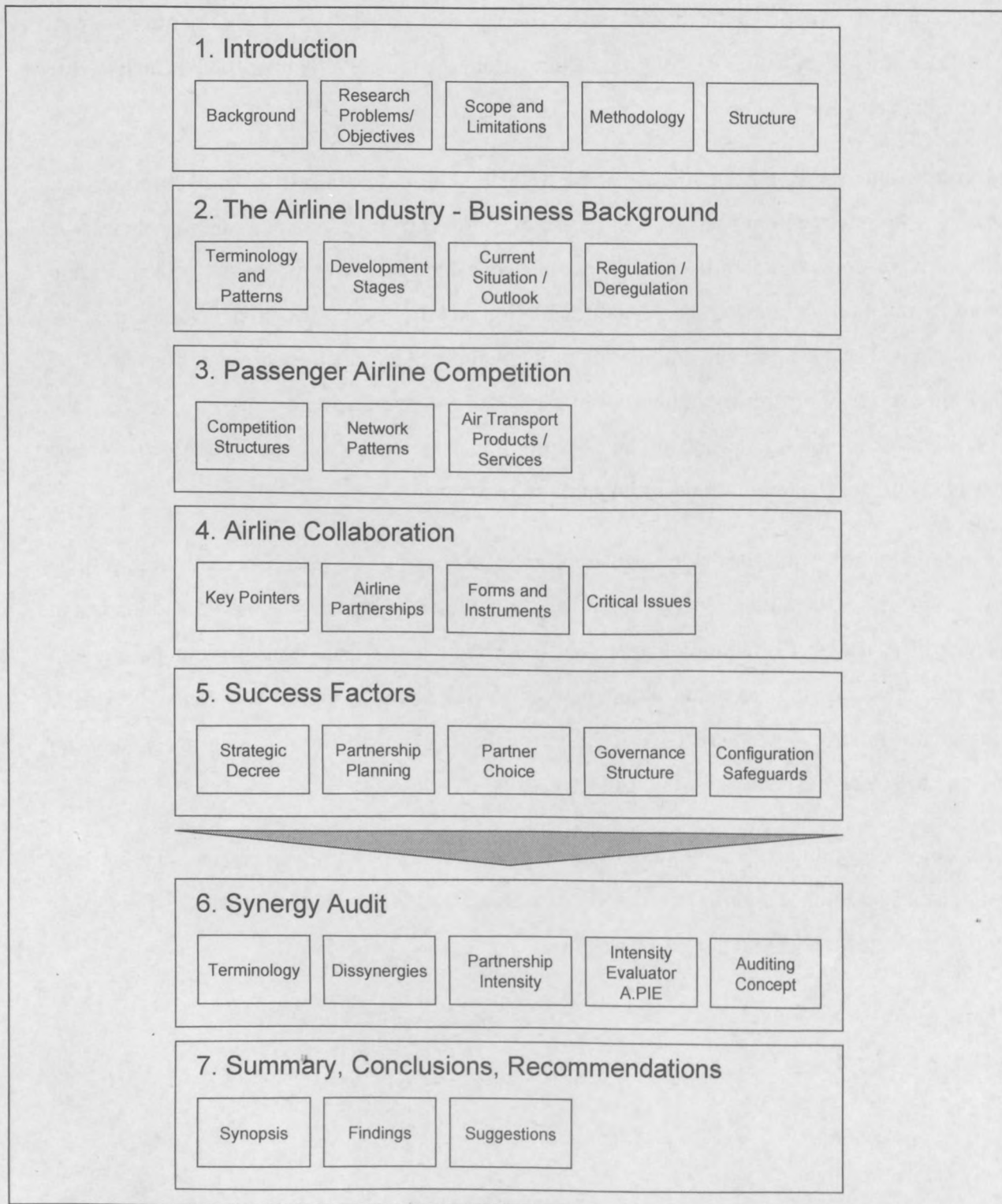
**Chapter 5** analyses the prerequisites and key factors of successful airline collaboration. The chapter introduces and observes the sequence of events of carriers assessing their own suitability to collaborate, followed by partner investigation, also by means of partnership fitness evaluation, the final choice, legal foundation and the organisational development of the partnership. The set-up of the collaboration is given detailed attention, specifically regarding selected aspects of airline operations. **Chapter 5** also endeavours to systematically present the best practices for the interairline alliance's entire life span, and establishes the theoretical basis as well as the touchstone of the synergy audit model.

**Chapter 6** finally develops the synergy audit model. A terminological discussion of synergies and dissynergies is critical: particularly for the general understanding and for subsequent standardised usage. Collaborative intensity is brought into direct relation with partnership benefits, thus enabling for the establishment of an indexed measurement system. The airline partnership intensity evaluator (A.PIE) is introduced as the core tool of a broader auditing process to detect and enhance interairline synergies.

**Chapter 7** recapitulates the findings, particularly those of chapter 5 and 6, and presents conclusions and implications of theory and practice. In addition, recommendations for further studies and practical action are given.

Figure 1.1 gives a comprehensive overview of the structure of the dissertation.

Figure 1.1: Structure of Presentation



Source: own overview



## **2 The Airline Industry – Background, Development and Regulative Characteristics and their Impacts on Strategic Alliances**

### **2.1 Introduction**

For many the airline industry appears to be exciting, innovative, forward-looking and operating on the frontiers of technological possibilities. Its international orientation, speed, customary luxurious furnishings and design still lend the industry a glamorous, exclusive flair. While these attributes certainly apply, the airline industry is, however, very cyclical, sensitive to changes in the economy and operates with marginal profitability. Years of peak growth and profits have been regularly succeeded by economic troughs - occasionally drastic ones. The last down-cycle, starting in 2001, has been marked by a substantial company shake-out. In addition to this sensitivity, airlines operate in a controlled environment with a host of stakeholders who, in many parts of the world, impede their development.

All of these seemingly contradictory issues, the forward-orientated, glamorous appeal as well as the economic frailties, and the controlling environment characterise the airline scene. The following serves to introduce this industry and discuss some cardinal developments, thereby focusing, in the second half, on a quantitative description and an examination of the regulation and deregulation of air transportation.

### **2.2 Terminology and Patterns of Air Transport Service**

The air transport industry is a comprehensive web of technically sophisticated components, as well as organisations and relationships, used to carry passengers, mail and freight between locations and to fulfil military and scientific tasks.

The civil airline industry - the research object of this dissertation - is part of the air transport industry and comprises the following elements:

- Aircraft and avionics equipment manufacturers and service providers,
- Aircraft and avionics distribution intermediates,
- Airlines,
- Airport authorities,
- Handling and value added service providers,
- Air traffic control services (ATC),

- Information technology (IT) providers,
- Government regulatory departments or authorities,
- Travel agents, tour operators and shipping agents, and, most importantly,
- Air transport objectives - passenger and cargo customers, consignors and consignees of air cargo (see Shearman, 1992, p. 7).

The air transport industry was, and still is, one of the main drivers for globalisation, despite its history of probably being one of the most regulated global businesses. The world as a global village became reality through the impetus provided by mass transportation and communication facilities. New technologies, business models and the changes in the regulatory environment have given the airline industry a fresh face, which recently opened up opportunities for all the interest groups involved. This chapter examines a selection of the above-mentioned air transport industry elements, with special reference to the revolutionising potential of some of them.

Air transport can be divided according to different criteria, resulting in various patterns. These criteria and patterns are used to further refine and limit the research objective of this dissertation.

Table 2.1: Patterns of Air Transportation

Criteria	Pattern
Transport Object	Passengers, Freight, Mail Air Traffic
Participants	Military, Civil Air Traffic
Accessibility	Private, Public Air Transport
Commercial Orientation	Commercial, General Aviation
Regularity	Scheduled, Charter Air Traffic, Unscheduled/Occasional
Distance Cluster	Short-, Medium, Long-Haul Air Traffic
Air Space	National, Regional, International Air Traffic
Air Traffic Area	Regional, Interregional, Continental, Intercontinental Air Traffic
Inventory	Piston and Jet-propelled Aircraft, Helicopter, Glider, Airship, Balloon, Hang-glider

Source: Pompl, 1998, p. 24

The research focus of this dissertation is functionally limited to passenger, civil, public, and scheduled traffic in various distance clusters, air spaces and traffic areas, and with miscellaneous inventory.

While most of the above criteria and patterns are clear cut on their own, the distinction between chartered and scheduled air traffic is described in more detail.



### 2.2.1 Scheduled Air Service

Scheduled air services are defined by the International Civil Aviation Organization (ICAO)<sup>1</sup> as “any scheduled service performed by aircraft for the public transport of passenger, mail or cargo” (see ICAO: Convention, Kap. XXI, Artikel 96 a. seen in Pompl, 1998, p. 25). Characteristics of scheduled air services are (see Pompl, 1998, p. 25 and Hess, 1994, pp. 51-53):

- Commercial orientation.
- Public availability - air transport must be at the public's disposal.
- Schedule orientation - prior to operating a transport service, departure and arrival times have to be determined. The transport service is required to be established for a specific duration, usually the timetable period (6 months), and transportation must be upheld irrespective of the number of passengers.
- Network orientation - the scheduled carrier has to offer at least one origin-destination (O&D) or point-to-point link that has to be serviced on a regular basis.
- Operating obligation, guaranteed provision - the carrier is required to maintain its operation as long as the local authorities' permission is valid. Permission, however, can be withdrawn in the case of operational and economic impediments.
- Transportation obligation - is an effect of the public availability of the air transport product and describes the basic binding nature of the contractual relationship between the operator and the passenger/air service customer. This contract can be dissolved should any danger to the public evolve as a result of the transportation agreement.
- Tariff obligation - tariffs must be published and - usually - be approved by local authorities. Airlines' commitment to the binding and applicable tariffs for the scheduled period is to ensure that every air traveller benefits from a transportation contract with comparable conditions.

Since the remainder of this study focuses on issues related to scheduled traffic, no further description of this type of air transport service will be provided at this point.

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<sup>1</sup> ICAO is a United Nations specialised agency comprising 185 nations that are signatories to the 1944 Chicago Convention under which ICAO was founded. Headquartered in Montreal, Canada its purpose is to foster and facilitate international civil aviation and development. All 185 nations agree to abide by the same civil aviation standards. Most nations, however, write their own rules, but they must meet ICAO's standards.



### 2.2.2 Charter Air Service - Non-Scheduled Traffic

Charter air service plays a substantial role in, particularly, European air traffic. Two of the world's largest charter carriers, namely Condor and Britannia Airways, are based in Europe.<sup>2</sup> However, charter air services have never been satisfactorily defined and no internationally concluded definition for non-scheduled traffic exists. During ICAO's Chicago Convention of 1944<sup>3</sup>, charter traffic was excluded from the negotiation and definition process, resulting in total liberalisation of non-scheduled traffic authorisation by the individual nations. Herein lies the reason why charter traffic has never been the subject of bilateral agreements.

Charter traffic today very much resembles scheduled air traffic. Despite the traditionally unregulated status of charter traffic in bilateral agreements, European deregulation opened an extended range of business opportunities for charter air transport operators (for details on European deregulation, see below). Non-scheduled airlines are now able to carry charter as well as scheduled service passengers on almost every connection between the members of the European Union. Charter airlines can declare their offer as charter, or as scheduled traffic (see Pompl, 1998, p. 31). In addition, charter carriers are allowed to distribute their tickets directly to passengers, whereas in the past the distribution process had to be handled by an operator, usually a tour operator, or travel agent (see European Commission, 1997, p. 43).

However, the majority of charter business is still generated through classic, and often vertically integrated, charter distribution channels, namely as part of package tours, and not as seat-only charter sales (see Gallacher, 1999, *New Challenge to Charter*, pp. 68-69). Freight transport on charter flights offers non-scheduled carriers new business perspectives and helps to increase profitability, especially on long-haul flights. Offers by charter carriers can now be displayed on computer reservation system (CRS) screens along with those of scheduled carriers. In this context, charter carriers have redefined their relationships with both other charter and scheduled airlines, while building more integrated business relationships (see European Commission, 1997, p. 43). With this new set of opportunities, charter traffic will soon lose its dichotomous character. The continued competition factor, however, will be the charter industry's focus on holiday travel at competitive fares, with little focus on passenger

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<sup>2</sup> Condor, a Thomas Cook AG subsidiary, is the largest charter carrier world-wide, with a total number of 50 aircraft and 24 billion revenue passenger kilometres (RPK) (see N/A, Thomas Cook - Unternehmensportrait, 2001).

<sup>3</sup> The Chicago Convention was attended by 52 nations to consider some form of multinational agreement on three critical aspects of international air transport: the exchange of air traffic rights (freedoms of the air), the control of fares and freight tariffs, and the control of frequencies and capacity (see Doganis, 1986, p. 25).



service (for further information on charter air traffic in Europe, see European Commission, 1997, pp. 42-46).

## **2.3 Development Stages of International Air Transport**

Air transport is an extensive industry, actively propelled and spurred by globalisation trends and economic growth in the last decade, as well as by the new regulatory framework. The following brief historical rundown of the evolution of the airline industry over the last 80 years is presented according to developmental stages. Some of the described issues are of particular relevance for airline co-operation topics and, consequently, are discussed in further detail in following chapters.

### **2.3.1 Competition Pertaining to Administration**

The first stage of air transport development can be described as “competition pertaining to administration” (see Klein, 1996, p. 13). Initially starting in the 1920s, soon after the First World War, it was not until regional peace was restored after the Second World War that major expansion really began. This era lasted until the late 1970s (see Hanlon, 1996, p. 1). During this period, airlines were monogamous co-operations in their home countries. Airlines participated in the global transportation industry on the basis of regulated markets and bilateral agreements between nations, established by the Chicago Convention in 1944 (see Abeyratne, 1996, pp. 800-801). To control fares and rules, as well as to regulate market mechanisms, individual countries formed the International Air Transport Association (IATA) in 1945. This led to a complex web of bilateral agreements between pairs of countries, which had a profound influence on the development of air transport.

During this era, marketing was a comparatively unimportant activity among airline companies around the world, due to stringent industry regulation. In addition, the industry was operating in a global seller's market. Protected by government ownership and regulation, airlines were particularly safe from serious competitive effects in the marketplace. In most cases, the industry showed an oligopolistic market structure. For instance, price competition was non-existent, promotional efforts were limited, product/service quality was uneven, and little was done to develop efficient distribution systems in the travel trade and through hub and spoke networks. With this approach, neither consumer needs and wants, nor their expectations had much meaning for airlines (see Kaynak et al. 1994, p. 236).



### 2.3.2 Competition Pertaining to Capacity and Fares, and to Alliances

Regulated markets were coming into conflict with the airlines' aspirations and objectives as well as with passengers' demands regarding fair air travel deals. In 1978, deregulation of the airline market started in the USA. In 1984, liberalisation commenced in Europe and initiated the "competition pertaining to capacity and fares" stage (see Klein, 1996, p. 13).

In due course, a framework for the abolishment of artificial air transport markets was created through air service agreements (ASA) and state protectionism was scaled down. The result was that individual airlines had to face market economy conditions and adjust to the new competitive situation. In this phase, the drastic nature of the changes in the global airline industry had profound effects on the development of this very volatile economic sector in most countries of the world. Demographic, legal-political, socio-economic and technological changes lead the way to a transformation of airlines and the way they managed their business domestically as well as internationally. This rapid re-structuring process forced airlines to modify their business policies and strategies as well as their marketing (see Kaynak et al., 1994, p. 236).

Airlines saw the only way to survive in this market environment was by drastic, although imprudent, capacity expansion both nationally and internationally. Results were massive overcapacities without the corresponding passenger demand. Negative impacts on the market were further generated by macro-economical influences such as the Gulf War of 1991. Some major, especially US, carriers were subsequently forced into bankruptcy.<sup>4</sup> The total loss of the global airline business during that period (1990-1993) surpassed the total profit generated in the aviation business from its inception until the beginning of the 1990s. The results of this market stage were drastic cost reduction and rationalisation programmes as well as a focus on productivity enhancements.<sup>5</sup>

This same era was marked by a wave of privatisation of flag carriers. The mounting costs of state-owned carriers and excessively high losses during the airline industry's recession compelled many governments to examine and implement privatisation.<sup>5</sup> This new autonomy

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<sup>4</sup> Although some US carriers fell under the US Chapter 11 code, which had allowed them to operate at a loss until that time.

<sup>5</sup> In the past 20 years, the capacity share of government-owned carriers among the world's top 25 airlines has declined from 38% to 10%. Currently (2002), of the top 25 airlines in the world, which control approximately 62% of the world's airline capacity, just four remain under full government control. All four, as well as other smaller airlines, have indicated plans to move towards privatisation in future (see Boeing Commercial Airplane Group, 2001, p. 39).



gave rise to a way out of the financial misery, hope for financial recovery and new business models. It resulted in the third stage of international aviation development, the “competition pertaining to alliances” (see Klein, 1996, p. 13).

For the first time in airline business history, this new era of competition pertaining to alliances allowed the establishment of a truly global airline business. Although it was run by national companies, air transport had always been a global industry through its reach, but with the formation of partnerships, the prerequisite for a true air transport business globalisation was provided. The “competition pertaining to alliances” era saw the emergence of a new competitive environment in which price wars, frequent flyer programmes and a host of innovative marketing programmes have become industry norms.

### **2.3.3 Competition Pertaining to Groups and Mergers**

Paradoxically, the international airline industry has as yet not seen the trend towards mergers and acquisitions that occurred in other, also formerly regulated sectors, in the late 1980s and throughout the 1990s. This trend towards concentration is still active and whole industry sectors will be re-shaped by huge blocks of competitors.

The airline industry is on the verge of being exposed to a similar trend. Some mergers of varying sizes have occurred in recent years; others are still locally constrained. Although European and North-American carriers have merged in their respective regions and countries true global concentration of the larger industry players has not yet happened (for a detailed discussion of concentration trends in confined regions, see Doganis, 2001, pp. 57-63).

The air transport industry, despite deregulation efforts, is still not fully liberalised. Competition authorities and ownership clauses make it difficult, if not impossible, for fully fledged mergers to take place. Consequently, deregulation must not be confused with full market liberalisation in the sense of the abolishment of all operational barriers and ownership restrictions. However, the political, regulatory and economical environment will have to allow airlines to concentrate on a worldwide scale. Market demand as well as shareholder interests will be the driving factors in the emergence of a new era of airline competition: the competition pertaining to mergers.

## 2.4 Current Situation and Outlook

The airline industry suffers from cyclical intervals of successes and depression. The following paragraphs provide a brief overview of the history and future trends of world air passenger traffic.

The following figures comprise the total world airline traffic of ICAO member nations in the years from 1989 to 2000.

Table 2.2: Total - International and Domestic - World Scheduled Airline Traffic, Passenger Numbers and RPK

Year	Revenue Pax (000,000)	% Change	RPK (000,000)	% Change
1989	1,119	-2,60	1,780,000	4,40
1990	1,165	4,11	1,894,000	6,40
1991	1,135	-2,58	1,844,000	-2,64
1992	1,145	0,88	1,928,000	4,56
1993	1,141	-0,35	1,949,000	1,09
1994	1,231	7,89	2,098,000	7,64
1995	1,304	5,93	2,248,210	7,16
1996	1,391	6,67	2,431,690	8,16
1997	1,457	4,74	2,573,010	5,81
1998	1,471	0,96	2,628,120	2,10
1999	1,562	6,20	2,797,800	6,50
2000	1,674	5,40	3,017,790	7,90
Total Increase 1989-1999	555		1,237,790	
Average Annual Increase		3,10		4,92

Source: Deutsche Lufthansa Aktiengesellschaft, Weltluftverkehr 1994, p. 66, Deutsche Lufthansa Aktiengesellschaft, Weltluftverkehr 2000, p. 72, Deutsche Lufthansa Aktiengesellschaft, Weltluftverkehr 2001, p. 72

Revenue Passengers (Revenue PAX) are all airline travellers accounting for turnover in exchange for the travel service. This figure excludes duty travel for airline and airline-related services staff. Revenue Passenger Kilometres (RPK) are calculated by multiplying the number of revenue passengers by the number of kilometres they have flown. In this context, the difference in average annual increase of revenue passengers and RPK leads to a simple conclusion: average travelled distance increased in the above period, or a disproportional growth of long-haul traffic as opposed to short-haul traffic can be observed.

Following the economic slump in 1990/91, partly caused by the Gulf War, international air traffic enjoyed relatively steady growth over the subsequent years. Subsequent to the economic crisis in Asia, the period 1998/99 was marked by only marginal growth. This local recession did not last very long and the upswing in Asia ought to accelerate, accounting for increasingly high growth in the years to come.

Figures for the entire 2001 have not been published at the time of this writing. It is expected, however, that the events of September 11<sup>th</sup>, 2001 have lead to the most drastic decline in air travel ever experienced. Traffic fell more than 10% in the months after the terrorist attacks



and the following military strikes. An averaged decrease of revenue passenger figures of about 4% is to be expected for 2001 (see N/A, 2001 Fall in Traffic First since 1991, 2002).

#### 2.4.1 Supply and Demand Structure

The supply of passenger air transport is based on aircraft seat capacity. This supply is generally measured in terms of available seat kilometres (ASK). ASK describes the number of seats an airline provides, multiplied by the number of kilometres they are flown. The load factor describes the ratio of revenue passenger kilometres (RPK) divided by available seat kilometres (ASK) and is measured in percentages. As an index of the occupancy rate of airline operations, the load factor is a primary means of measuring overall or route-related operational success. The following table gives an overview of ASK and RPK as well as load factors for airlines of ICAO member nations.

Table 2.3: Total - International and Domestic - World Scheduled Airline Traffic, ASK, RPK and Load Factor

Year	ASK (000,000)	% Change	RPK (000,000)	% Change	Load Factor %
1989	2,618,000	3,70	1,780,000	4,40	66,14
1990	2,801,000	6,99	1,894,000	6,40	65,89
1991	2,777,000	-0,86	1,844,000	-2,64	64,30
1992	2,925,000	5,33	1,928,000	4,56	64,67
1993	3,013,000	3,01	1,949,000	1,09	64,50
1994	3,165,000	5,04	2,098,000	7,64	66,65
1995	3,358,600	6,12	2,248,210	7,16	67,45
1996	3,563,770	6,11	2,431,690	8,16	68,67
1997	3,727,900	4,61	2,573,010	5,81	69,58
1998	3,837,730	2,90	2,628,120	2,10	68,92
1999	4,050,780	5,60	2,797,800	6,50	69,30
2000	4,259,000	5,10	3,017,790	7,90	70,86
Total Increase 1989-1999	1,641,00		1,237,790		
Average Annual Increase		4,47		4,92	

Source: Deutsche Lufthansa Aktiengesellschaft, Weltluftverkehr 1994, p. 66, Deutsche Lufthansa Aktiengesellschaft, Weltluftverkehr 2000, p. 72, Deutsche Lufthansa Aktiengesellschaft, Weltluftverkehr 2001, p. 72

Very evident from this table is the decrease in demand in 1991 as a result of the Gulf War crisis and the 1999/98 decline due to the recession in Asian countries. Chronologically, ASK adjustments did not match RPK decreases between 1991-1993, leading to lower load factors. However, demand has been increasingly matched by supply of aircraft seats in the last decade. The correlation coefficient is  $r=0,91^6$  for the overall period, which indicates the high

<sup>6</sup> Own calculation on the basis of the given figures. The correlation coefficient  $r$  provides an index of the degree to which the paired measures co-vary in a linear fashion. In general,  $r$  will be positive when items with large values of measure  $X$  also tend to have large value of  $Y$ , whereas items with small values of  $X$  tend to have small values of  $Y$ . Correspondingly,  $r$  will be negative when items with large values of  $X$  tend to have small values of  $Y$ , whereas items with small values of  $X$  tend to have large values of  $Y$ . Numerically,  $r$  can assume any value between 1 and -1 depending upon the degree of the relationship. Plus and minus 1 indicate perfect positive and negative relationships, whereas zero indicates that  $X$  and  $Y$  values do not co-vary in any linear fashion.



degree to which the paired measures ASK change and RPK change co-vary. The increasing discipline of matching demand and supply is also reflected by steadily increasing load factors.

Again, figures for 2001 and its dramatic effects on global aviation are not available at this point. While airlines did react swiftly with capacity decreases, leading to an approximately 10-13% decline in ASK, the averaged yearly ASK development lies in the area of -1%. ASK adjustments and (temporary) retirements of aircraft have resulted in a comparatively high estimated load factor of about 71% for 2001 (see N/A, 2001 Fall in Traffic First since 1991, 2002).

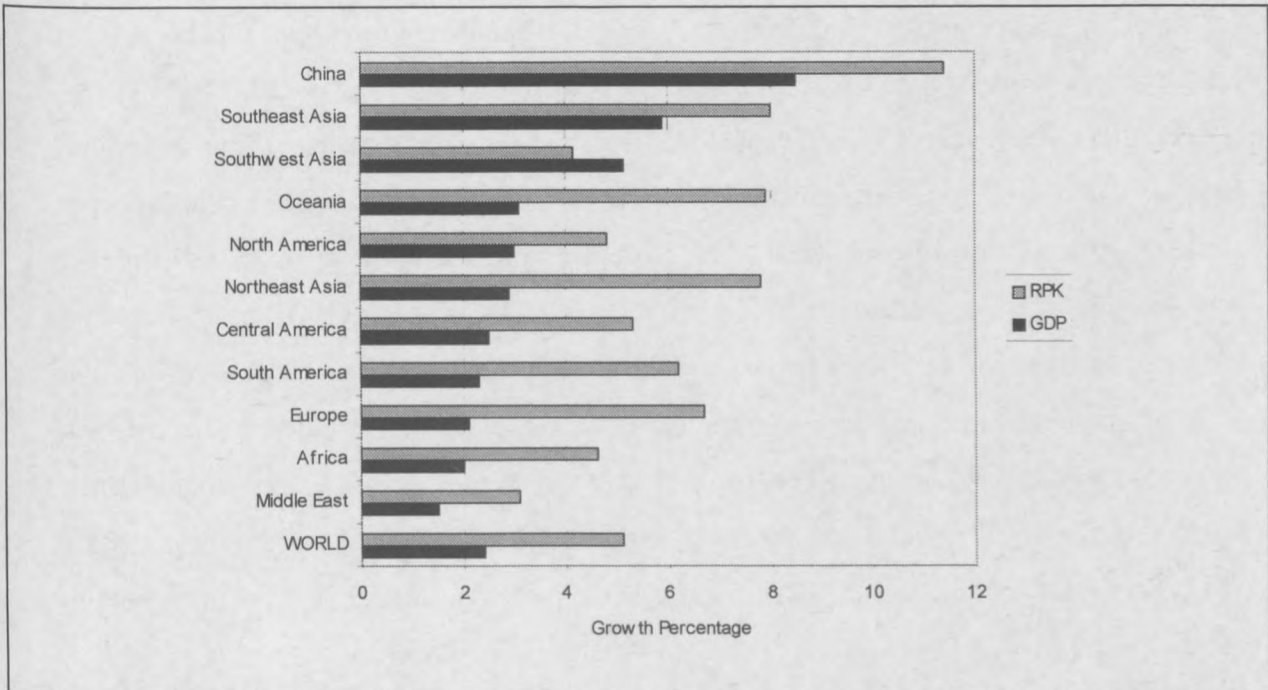
Airlines, however, have not always been successful in matching supply and demand. One reason for the drastic effects of the economic slump in 1990-91 was the inability of airlines in previous years to equate demand and supply figures. Whilst demand for air transport grew by 22% between 1988 and 1993, global air transport capacity rose by 33% in the same period (see Nuutinen, 1997, p. 7). This led to low load factors and little or no profitability. After the huge losses generated during the Gulf War crisis, the market transformed from one characterised by chronic overcapacity and persistent losses into one where demand and supply were better matched and where airlines could realistically expect to make a profit. After the recovery in 1993, airlines returned to a normal and sustainable growth pattern. Furthermore, the financial recovery of passenger airlines was driven by rationalisation and capacity cuts within major carriers. The combination of capacity cuts and growth in demand has additionally produced an improvement in load factors.

Still, air traffic demand is uneven throughout the world. Economic crises like the one in Asia in the late 1990s and the slowdown of the Japanese economy in 1998/99 had an impact on air transport behaviour, resulting in locally varying growth figures and development potential. Similarly uneven were the declines in air traffic after the events of September 11<sup>th</sup>, 2001. The key independent driver of cycles of air travel growth is economic growth, yet there is no clear pattern of decline or boom.

The following chart gives an overview of regional average annual growth rates in RPK, in relation to the respective average annual growth rates in Gross Domestic Product (GDP) for the period 1986-1999. The chart shows that RPK always grows disproportionately to GDP and that the figures vary largely between the mentioned regions. The correlation between the growth figures for the shown regions consequently is only  $r=0,70$ .



Figure 2.1: Average Annual RPK and GDP Growth Rates 1986-1999



Source: Boeing Commercial Airplane Group, 2000, p. 23

China shows an average annual RPK growth of almost 12% over the described period, whereas other regions like the Middle East fall well below the 4% rate. Travel growth outpaces GDP growth in the described period by a factor of about 1,8. The evidence suggests, however, that travel growth is close to being equal to economic growth plus two percentage points (see Boeing Commercial Airplane Group, 2000, p. 23). These varying patterns in GDP growth and RPK growth demand some explanation:

- Historically, travel growth has not just been stimulated by the overall wellbeing of the economy, but also by lower fares, growing international trade and other air transportation-linked services. The events of late 2001 still need to prove a negative correlation between recession and decline in air traffic.
- Fares have been declining at a rate of about 1% per year after adjustment for inflation (see Boeing Commercial Aircraft Group, 2000, p. 27). More private passengers have the opportunity to travel more often due to fare reductions that also allow for more cost-effective business travel.
- International trade has been an additional travel stimulator. With a growth rate of twice the growth rate of the world's GDP, economies involved in international trade stimulate the travel patterns of trade players. This aspect is likely to be contested by proponents of the travel-decreasing effects of new communication technologies. However, new

communication technologies fuel the will to travel and to personally meet with the communication counterpart (see Piepelow, 1997, p. 92 and paragraph 3.2.4.2 below).

- Higher frequencies and better networks also stimulate travel. In many instances, new air travel offers have become a viable substitute for other means of land-based transportation. Bypassing hubs, offering direct instead of connecting flights at higher frequencies has also lead to a stimulation of air travel. This is often due to the opening up of new market opportunities through reduced market regulation (see Rolls-Royce, 1999, p. 4). Regional deregulation and overall increased competition have lead to a polarisation within the industry between small regional carriers and large global airlines. Regional carriers open up new markets that have not been serviced before, while larger carriers have retained control of the key regional hubs. However, with the aid of additional feeder airlines, flight frequencies can be increased, offering more convenient and marketable connections and fares.

The distinction between travel growth stimulated by the above-mentioned means and travel growth due to economic growth is very important in anticipating when travel growth might be approaching maturity and will begin to slow down. In the last months of 2001, economic circumstances had an ad hoc influence on travel growth, although, recession did not, per definition, occur in the majority of the main economic centres of the world. However, the effects on the above-described relation between GDP and RPK growth still need to be evaluated and the correlation between the indexes needs re-adjustment.

Physically, the supply of air transport services was provided by about 19,000 aircraft in 2000. This figure includes all aircraft of ICAO member state airlines with a maximum takeoff weight of 9 tons or more. Among this total figure are about 16,000 jet-aircraft (see Deutsche Lufthansa Aktiengesellschaft, 2001, p. 77). The majority of these jet-propelled aircraft are single aisle (66%), followed by twin aisle (19%), smaller regional jets (8%) and the Boeing 747 cluster (7%) (see Boeing Commercial Airplane Group, 2001, p. 13).

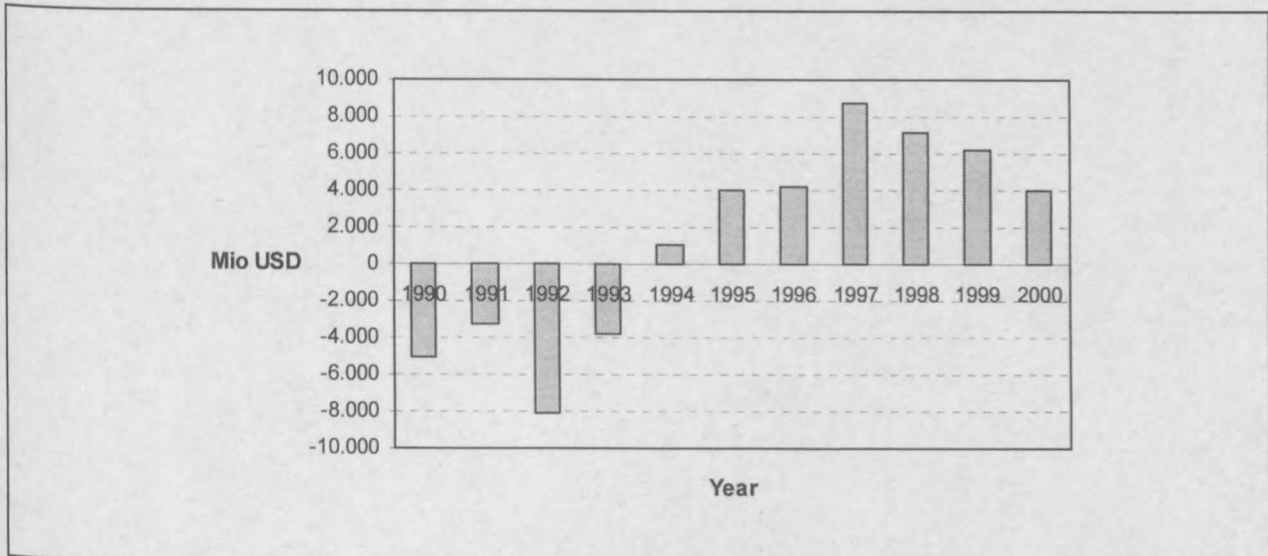
#### **2.4.2 Recent Financial Performance and General Expenses Structure**

From a financial business performance perspective, the airline industry is traditionally and on average not very profitable. Despite growth and lower unit costs as the result of restructuring processes, the airline industry has been marked by a structural and chronic unprofitability. At the beginning of the 1990s especially, the global airline industry was faced with huge overall losses, followed by a similar, yet more drastic situation from late 2001 to the beginning of



2002, which is not as yet quantifiable. IATA estimates from the beginning of 2002 indicate a total loss of about USD 15 billion in 2001 (see N/A, Global Airline Industry in Trouble?, 2002). The following chart shows the net results of IATA member airlines' entire network over the given period.

Figure 2.2: Net Results of IATA Member Airlines 1990-2000



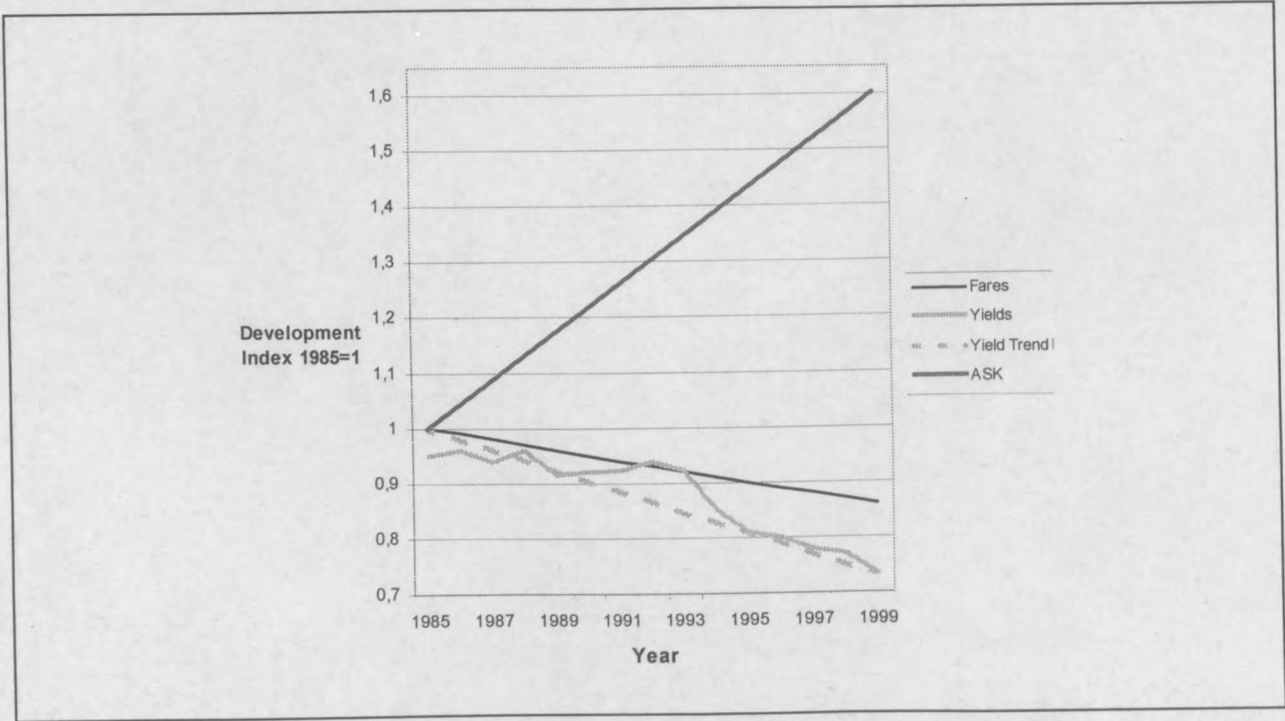
Source: Deutsche Lufthansa Aktiengesellschaft, 2000, p. 80, Deutsche Lufthansa Aktiengesellschaft, 2001, p. 80

Financial recovery commenced two years after the Gulf War crisis, with total profits peaking in 1997. However, the global airline industry is very sensitive towards changes in regional economic cycles. The years 1998/99 were marked by the Asian recession which had an immediate effect on airline profits. Decreased load factors, combined with chronically low profit margins thereafter, accounted for further decreases in the airlines' earnings.

Consequently, shareholders lack confidence in the airline business. The result is that the airline industry under-performs stock markets - 90% of the time in the period 1970-2000 - and since 1990 the airline industry has trailed the markets by 10%. Much of this lack of performance can be blamed on rising fuel prices and currency fluctuations (see N/A, 2000, A One Way Bet, p. 9). In this context, it is exactly because margins are so fragile that movements in input prices matter so desperately. Additionally, prominent events have negative effects on airlines' stock performance. US airline stocks declined by more than 40% after trading re-started following the incidents of September 11<sup>th</sup>, 2001. It is exactly this inherent sensitivity to disasters and economic fluctuations, and their dependence on high-cost input factors that make airlines a less preferred option for private and institutional capital investment.

Yields are another important index in evaluating an airline’s performance and profitability. Yield is calculated by dividing revenue by RPK. It represents an aggregate of all the airfare and airline revenue charges and is measured on a per kilometre basis.

Figure 2.3: Yield, Fares and ASK Development 1985-1999



Source: Boeing Commercial Airplane Group, 2000, p. 25 and own calculations

The chart above shows the development in fares, yields and ASK on the basis of 1985 figures. With an average increase of ASK of 4,2% per year in the described period, fares dropped at about 1% a year and yields at about 1,9 % a year.<sup>7</sup> One of the reasons why yield decrease continuously overstates fare reductions is the tendency towards longer flights, which has been previously mentioned. The leverage effect of distance in yield calculation becomes apparent in the following simplified yield calculation.

Table 2.4: Simplified Yield Calculation

	Flight 1 A-B	Difference	Flight 2 A-C
Flight Revenue	1.500 USD per PAX	+66%	2.500 USD per PAX
Distance/RPK	5.000	+100%	10.000
Yield	0,30	-16%	0,25
Optimum - Equilibrium	1.500 USD	+100%	3.000 USD
Distance/RPK	5.000	+100%	10.000
Yield	0,30	=	0,30

Source: own calculation

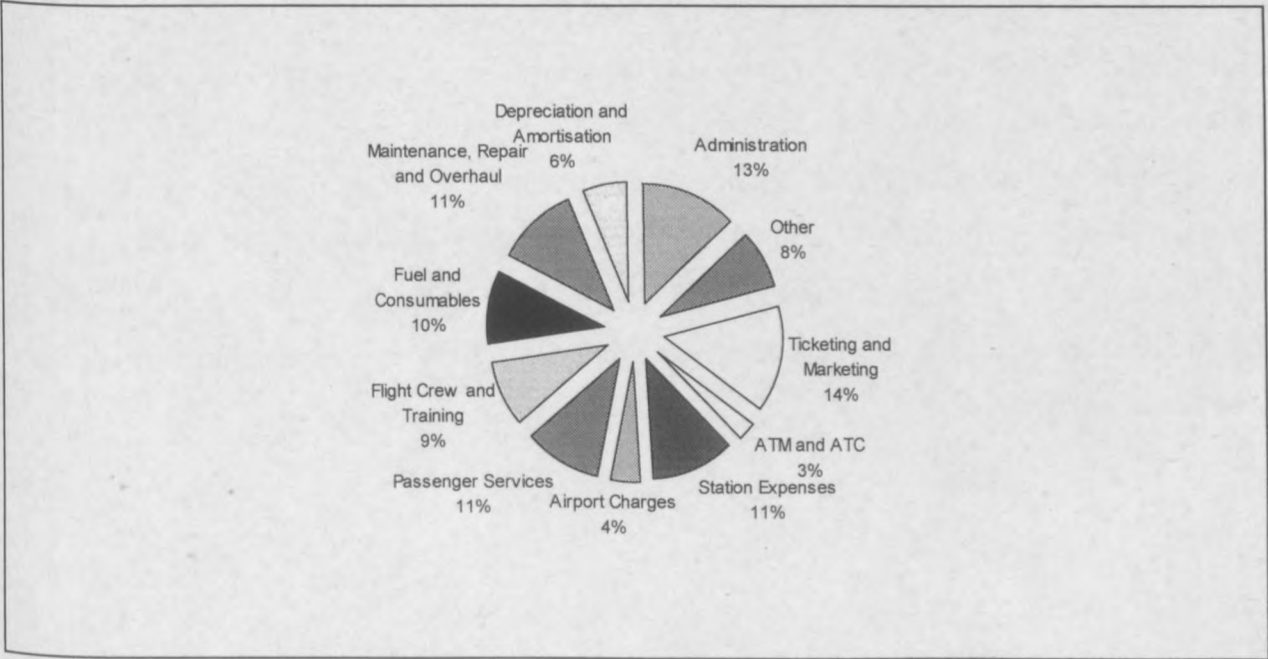
<sup>7</sup> Yield and fare figures have been adjusted for inflation.



From a marketing perspective it is impossible to increase fares proportionally to distance, since fares are exposed to a distance-induced degression. In highly competitive markets, fares are especially under constant pressure from other market players, which drives down yields. Due to a unit cost degression on long-haul flights, it is not even necessary to proportionally increase fares from a financial or cost standpoint. However, from a single yield perspective, yields do decrease with the length of services. This is why in an era of increasing long-haul flights, paired with increasing input costs, yields generally do decline. In 1999, traffic grew by slightly more than 5% worldwide, but at the same time yields declined 4% (see N/A, A One Way Bet, 2000, p. 9).

With the above roughly describing the income of airlines, the following pie chart visualises areas of airlines' operating expenses. Airline operating expenses include all activities to attract customers and deliver passengers and cargo to their destinations. Embedded in these activities is a set of support services necessary to operate airline fleets effectively and dispose of surplus aeroplanes.

Figure 2.4: Areas and Shares of Airlines' Operating Expenses



Source: Boeing Commercial Airplane Group, 2000, p. 12

According to the Boeing estimates for 1999, operating expenses for all ICAO member airline totalled USD 330 billion (see Boeing Commercial Airplane Group, 2000, p. 12). With little profitability and small margins it becomes obvious that an increase in fuel prices, or in other high volume/value operating expense areas, can have a disastrous effect on an airline's overall financial performance.

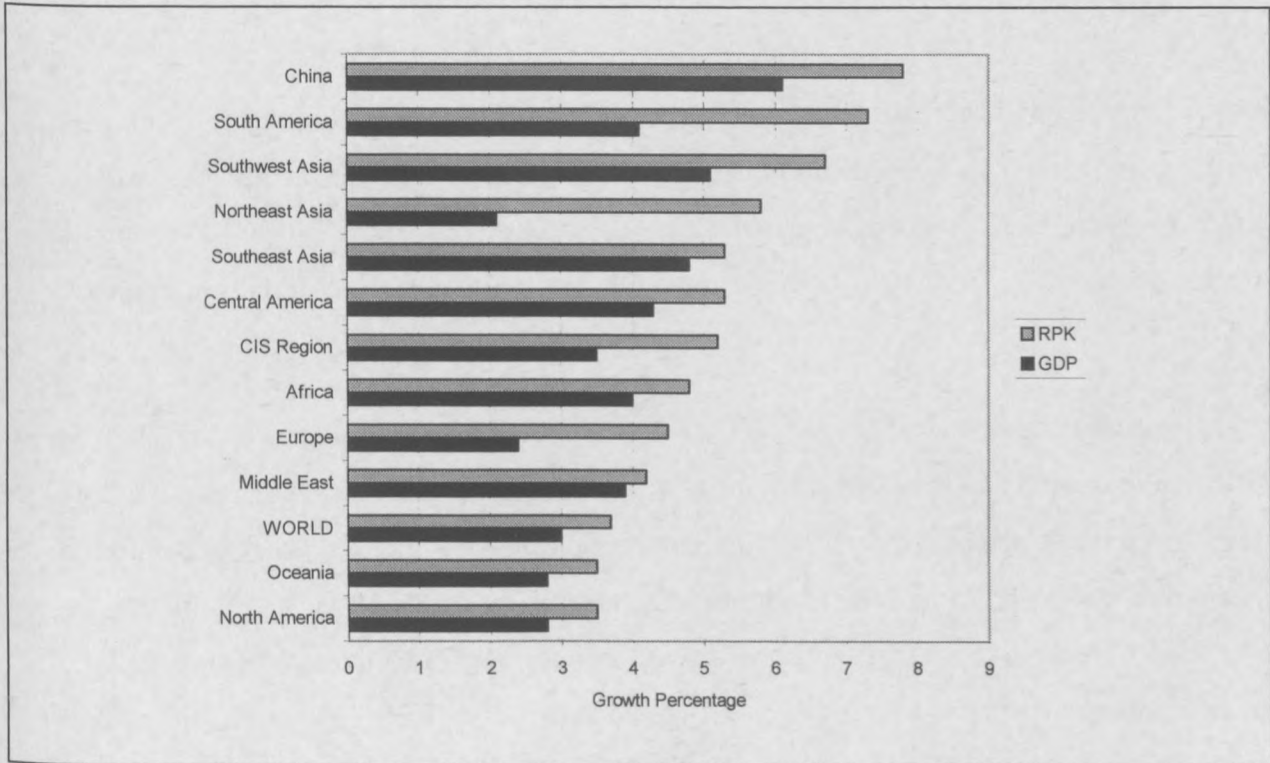
### 2.4.3 Market Outlook for 2020

Global aviation was immediately hit hard by the events of September 11<sup>th</sup>, 2001. In the subsequent months, the declining world economy, loss of customer confidence in safety and security as well as the new competitive situation have lead to the most drastic change scenario international air transportation has ever experienced. With incumbent carriers facing bankruptcy or going into liquidation, and a huge number of jobs being lost, this development is unparalleled.

However, economic growth - one of the main drivers of the airline industry - will indicate positive prospects. Regained markets confidence has already initiated slight recovery starting as early as the beginning of 2002. All indicators are that as an industry sector, air traffic will continue to expand in various geographical sub-markets in future, albeit at differential rates. The upswing in Asia will accelerate in 2002, with Japan's economy in the upswing from its low points and the "Asian Tiger countries" showing improved domestic market performance. The United States' growth remains above the predicted level. European economies are slightly below the trend, but their economic figures are pointing up. South America, however, is at the bottom of its downturn and economic recovery is not expected before late 2002. Passenger air travel growth will increase disproportionately to global economic growth (see Boeing Commercial Airplane Group, 2000, p. 27). Average economic growth, measured in GDP growth, for 2001-2020 is to be expected at about 3%. RPK is predicted to increase by 4,7% over the period from 2001-2020 (see Boeing Commercial Airplane Group, 2001, p. 9). The following graph visualises the average annual GDP and RPK growth by region for the period 2001 to 2020. The effects of the economic downturn in 2001/2002 are, however, not reflected in the figure.



Figure 2.5: Average Annual GDP and RPK Growth Prediction by Region for 2001 to 2020



Source: Boeing Commercial Airplane Group, 2000, pp. 28-29

China will generate top GDP and RPK growth, also in the following two decades not, however, equalling the performance of recent years. Southeast Asia will not reach the high GDP growth rates of the years before the recession, but will be close to the worldwide growth trend.

Air travel will still grow faster than the economies. The above-discussed set of stimuli will be partly responsible for this future trend. Communication technologies will have an increasing impact on business life, but they will have an overall neutral influence on demand for air travel. Any direct substitution will be counterbalanced by the stimulus they will provide for growth (see Airbus, 2000, p. 12).

In the projection period, the correlation of GDP and RPK growth will be less significant ( $r=0,51$ ) compared to historic figures ( $r=0,71$ ).<sup>8</sup> Enhanced yield and revenue management systems as well as new distribution methods will allow for higher load factors and utilisation and will result in improvements in productivity.<sup>9</sup> This improved capacity utilisation will absorb part of the demand increase and thus requirements for new seats will be brought to a

<sup>8</sup> Own calculations based on figures by Boeing Commercial Airplane Group, 2000, p. 23 and p. 28

<sup>9</sup> Even after September 11<sup>th</sup>, 2001, load factors could be maintained at high levels due to carriers swiftly reacting with capacity reductions.

relatively lower level. Load factors are projected to reach more than 73% in 2019 (see Airbus, 2000, p. 15).

Yields, however, will decrease further, due to persisting trends towards long-haul travel. Fuel will have a bigger impact on operating expenses. According to IATA estimates, fuel will be approximately 18% of an airline's operating expenses, as opposed to 12% (ICAO estimates 10%) in recent years (see IATA, Jeannot Sees Renewed Optimism in Air Traffic Forecast, 2000).

The USA and Europe will move closer to a groundbreaking agreement, creating a transatlantic common aviation area. Alliances will continue to proliferate and in the next years most large airlines will be a member of one grouping or another. In recent years, globalisation has become a watchword in the international airline industry. Many of the successful airlines have tried to make their globalisation objectives an integral part of their corporate strategy, while allowing the global operations to grow and prosper. Within this overall framework, joint marketing agreements, co-marketing and mergers, cross-border equity investments and equity swaps have become the primary forms of market entry. In a next step, further financial linkages between carriers and mergers will occur, creating true consolidation in the industry. Budget airlines will prosper in their respective niches and will especially stimulate intra-regional point-to-point traffic further.

The Internet will become a major force in both distribution and competition, cutting costs and selling seats that previously could not be sold. Travel agents will not succumb to the double threat of commission cuts and online competition, but will return to their role as travel consultants, charging appropriate fees for their services.

Air traffic control (ATC)\*problems and delays will potentially worsen in Europe and the USA, as extensions of present facilities fail to keep up with traffic growth. In Europe, ATC privatisation will aim to redress traffic management inadequacies.

Excess capacity will decrease as airlines' fleets become more flexible and a better match of capacity and demand is achieved. Post-privatisation airlines are increasingly focused on shareholder-value concepts and the specific demand of capital markets (see N/A, Blue Skies, 2000, pp. 32-40 and further below). This combination of market trends and institutional reforms, combined with rising incomes and increased leisure time, will contribute to the steady growth in demand in aviation markets.



Some of the issues on the developments in global aviation markets are discussed in greater detail below.

## 2.5 Regulation and De-Regulation of the Air Transport Market

The air transport industry has always been regulated. From its phases of predominately private ownership in the first 40-50 years of the 20<sup>th</sup> century, through stages of public ownership until the mid 1980s and the current phase of privatisation, institutional regulation has been a chronic condition. Regulation as a codified set of rules and other restrictions, usually statutory, circumscribe the limitations on an air traffic operator's freedom to engage in economic activities. Regulatory power typically resides with the relevant state department or government ministry.

Motivation for regulation is diverse and depends on the level of aggregation and the country of origin. However, there are some principal economic arguments for regulation of air transportation, such as:

- Guaranteed provision of air services
- Control of the market power of individual players
- Effects on externalities
- Control and levelling of information deficiencies, especially on the consumer's side
- Controlling excessive competition (see Turnbull, 1999, p. 2).

Also applicable to the regulation of the air transport industry are military concerns regarding exclusive national sovereignty over the air space above a nation's territory. This position, in addition to embodied concerns about security, technology and prestige, make airlines a highly politicised matter. Furthermore, another motivation for regulation is prevalent. Since practically all flag carriers outside the USA were publicly owned and heavily subsidised, the regulatory system was originally based on common interests - minimising competition between the national carriers saved nations from further expenditure (see Lyth, 1997, p. 156). The US market also showed a different regulating structure. With the absence of typical flag carrier(s) and focused politicisation, the oligopolistic industry structure was regulated by state authorities, allowing for a more commercial development.

The transformation of highly regulated air transportation markets into more liberalised ones, probably was and still is the most important driver for the current developments in global aviation. Since some of its effects lead the way to the formation of airline partnerships, and as

liberalisation is still to impact globalisation and industry concentration, the complex situation regarding deregulation is described below, with particular reference to the US and the European markets.

### **2.5.1 Deregulation in the USA**

In 1978, US President Jimmy Carter signed the “Airline Deregulation Act” which marked the beginning of a gradual, but radical reform of the domestic US air transportation market (see Thierer, 1998, p. 5). Liberalisation aimed at enhancing competition, increasing the range of airline offerings and helping to lower tariffs by way of lowering market entry and exit barriers. The legislation revolutionised commercial aviation in the USA by placing maximum reliance on competitive market forces.

Gradually airlines that were willing to and capable of entering the market were granted traffic rights, unless a competitor could prove that this would be against public interest. In addition, tariff control was completely abolished, although fares were fixed in a “zone of reasonableness” (see Lyth, 1996, p. 165 and Thierer, 1998, p. 5). November 31<sup>st</sup>, 1984 saw the disbanding of the regulating Civil Aeronautics Board (CAB) - its remaining functions were transferred to the Department of Transportation (DOT) (see Lyth, 1997, p. 165).

The USA's deregulation of its domestic markets for passengers in 1978, combined with its subsequent commitment to a gradual “Open Skies” approach to international aviation in 1979 (see below), affected the way US policy was conducted, but also, through demonstration and direct knock-on effects, the ways many other air transport markets are now deregulated.

#### **2.5.1.1 US Market Impact**

The deregulation environment caused a multitude of changes within the US airline industry. One unexpected result of deregulation was the emergence of complex systems of tariff structures. Initially, a simplification of airline tariffs was expected, but the contrary occurred. Major carriers, especially, developed intricate and regularly-changing fare systems. The introduction of tariff restrictions (e.g. minimum/maximum stay-away, ticket change restrictions, and advance booking restrictions) and market-related tariff differentiation, allowed the major airlines to segment travel demand better.

Another new development in post-deregulation times was the introduction of frequent flyer programmes (FFP) to enhance passenger loyalty. Closely related to the unclear tariff structures, was the increasing importance and, consequently, prolific development of more



sophisticated computer reservation systems (CRSs) to handle and distribute passenger aircraft capacity.

A further direct consequence of deregulation was the re-configuration of airlines' networks (see Borenstein, 1992, p. 46). Whereas prior to deregulation networks consisted primarily of direct city links, deregulation fostered the development of hub and spoke systems, which are described below.

The market-structural consequences were significant. The beginning of deregulation saw a high number of new entrants. With entry restrictions removed, the market experienced an influx of new firms. The number of domestic carriers grew from 36 to 123, filling local market niches. Accordingly, the market shares of bigger carriers subsequently decreased (see Borenstein, 1992, p. 46). After 1985, the markets became increasingly price elastic, in particular in the leisure traveller segment, resulting in a growing number of bankruptcies and exits from the industry (see Glisson et al., 1996, p. 27). This was motivated in some instances by the dearth of adequate air transport business skills and cyclical problems such as the second oil crisis and the effect of the global economic cycle on the US economy. In addition, incumbent carriers managed, by executing market power, to force their new competitors to operate with no or little profitability.

Consequently, the consolidation of airlines in the US once again increased as many new entrants left the market. In the late 1980s, bankruptcies, acquisitions and mergers among airlines led to an unprecedented level of concentration and the emergence of US American megacarriers. In this competitive market environment, the network integration by the larger carriers, focusing on acquisition of new entrants, afforded them forceful market positions. The importance of CRSs and FFPs increased in such a way that smaller players, without their own respective systems, were obliged to merge with larger airlines in order to have access to these marketing tools. In 1984, the control of domestic airline mergers shifted from the CAB to the DOT (Department of Transport), with the result that the number of mergers increased dramatically (see Jäckel, 1991, p. 162 and Shearman, 1992, pp. 95-99).

New, liberal air transport policies and their lax application in the USA also had an impact on international air traffic processes. Yielding to pressure by the USA, IATA limited its influence on tariffs, which marked the end of the price cartel on the North Atlantic air routes. Simultaneously, the USA was very much involved in signing bilateral agreements with other



nations with the aim of opening international air traffic to more competition (see Steininger, 1999, p. 30).

### **2.5.1.2 Contestable Market Theory as a Policy Characteristic of US Deregulation**

Despite the rapid emergence and demise of new carriers, the US domestic market was not necessarily exposed to a laissez-faire approach, but to a theoretical framework that allowed for maximum freedom of business action. The market was not fully deregulated in the sense that companies could merge in a totally unregulated way or the industry concentrate limitlessly. The DOT adopted the “contestable market theory” to control mergers and the action of market players (see Baumol et al., 1982 and Bailey and Baumol, 1984).

“The key point in this theory is the threat of competition, as distinct from actual competition. (...) The theory’s fundamental assumption is that firms operating in an (...) oligopolistic industry will still price at the same levels as they would in more competitive industries, provided a threat of competition exists.” (Hanlon, 1996, p. 35).

The contestable market theory is based on the notion that the existence of a large number of actually present competitors cannot discipline established firms, but that the mere presence of potential competition does. This presence of potential competition is represented by the lack of market entry barriers through costless access, or the dearth of market exit barriers (see Borenstein, 1992, pp. 52-53). According to this assumption, established carriers could not charge excessive fares in a contestable market, as this would pull in new market entrants, who would bring fares down again. The DOT also assumed that predatory behaviour would not be sensible in aviation, as an airline threatened by some other carrier could easily move its assets (mainly aircraft) to some other market. However, the DOT relied on this “hands-off” approach for far too long and did not monitor and regulate mergers and market power accurately (see Williams, 1993, pp. 58-59).

In the meantime, large carriers started building individual market entry barriers for new entrants by giving special commissions to agents, establishing highly effective CRSs, FFPs and yield management systems as well as hub and spoke networks. This all led to a steep increase in concentration in the local US market. Only in 1989 did the US Department of Justice (DOJ) take control of the high rate of mergers and acquisitions. By that time, many carriers had lost their traffic rights and equipment to larger operators, or had been forced into bankruptcy. One of the most prominent victims of the lack of regulation on concentration was PanAm. The contestable market theory used to liberalise the US domestic market had failed



and the common belief that deregulation, as a government-controlled process, had abolished all market barriers and guaranteed free and fair competition proved to be wrong (see Williams, 1993, pp. 155-158).

### **2.5.1.3 Critical Issues of US Deregulation**

Full deregulation of the domestic US market, underlying the contestable market theory, had certainly not produced the desired results. The rapid shift from a highly regulated to a fully deregulated market environment had only proven to be advantageous for a large number of carriers in the short term. Insufficient control in the years directly after deregulation led to an era of domestic concentration, which threatened to jeopardise the positive aspects obtained from liberalising air transport.

A further initial frailty of US deregulation was the sole focus on the domestic market. Deregulation aimed particularly at forcing airlines to no longer regard their home market as protected fortresses, but as open battlefields (see Klein, 1996, p. 12). The US CAB and, thereafter, the DOT encouraged competition, then, however, initially protected the airlines and labour unions to the detriment of broader or longer-range air transport interests. Its reluctance to permit domestic market access to foreign airlines and to allow greater foreign ownership of airlines are two examples of the deregulation's shortcomings. Shutting out foreigners as potential investors, or potential air traffic service operators, not only restrains competition in the domestic American market, it also gives American airlines unjust advantages on international routes. Being able to feed their international services from the spoke routes running into their hubs, they are in an advantageous position in contrast to foreign carriers, who have to rely on local traffic at the gateway city they use (see N/A, *Let Fly*, 2001, p. 15).

The deregulation policies are further criticised for allowing incumbent carriers to unrestrictedly hinder the market entrance of smaller carriers. In a predatory manner, incumbents matched fares and added capacity until a threatening new market entrant withdrew. In due course, to prevent such behaviour, the DOT considered whether commission overrides, corporate discounts and frequent flyer awards, all products of deregulation, were being used in ways that targeted new entrants unfairly (see Flint, *Deregulation 1978-1998*, 1998, p. 5).

US deregulation has, however, also been repeatedly scrutinised with regards to its positive effects. The outcome of US deregulation can be summarised in terms of the following factors:



- Deregulated competition in the US aviation market seems, despite its mentioned frailties, to drive market mechanisms that guarantee an effective resource allocation regarding air traffic and an increase in the price/quality option. Quality improvements are indicated by more aircraft departures, also at smaller and medium-sized airports, fewer delays (even though, in many instances, the number of delays are still unacceptably high), and the availability of new service types and marketing options (see United States General Accounting Office, *Airline Deregulation: Changes in Airfares*, 1996, pp. 3-4 and p. 33).
- Tariffs did generally decrease, although at large and congested community airports fares have risen since the beginning of deregulation. Relatively more passengers travelled on long haul connections, and the number of frequencies grew. From an airline perspective, lowered tariffs, especially on long-haul services, coincided with decreased yields (see Thierer, 1998, p. 6 and United States General Accounting Office, *Airline Deregulation: Changes in Airfares*, 1996, pp. 22-23).
- Initially, the market power of established carriers seemed to be curtailed, since entry barriers for new entrants were fairly low (see Pompl, 1998, pp. 335-336). Subsequently, this notion changed as a result of the admitted failure of the contestability of air transport markets. In addition, major carriers developed a range of tools to increase entry barriers in ways that forced many new entrants out of the market. Market entrants at smaller and medium airports still faced difficulties establishing their operation due to slot controls and long-term gates leases (see United States General Accounting Office, *Domestic Aviation: Barriers to Entry*, 1997, p. 2). The consequence was a high industry concentration. In 1990, the eight largest US carriers held 94% of the domestic passenger market and controlled almost all the major hubs (see Turnbull, 1999, p. 5).

### **2.5.2 Deregulation in the European Integration Region**

Liberalising European air traffic seemed a difficult task as the mostly state-owned, inefficient carriers were as little interested in changing their status quo as were the national governments of the European Economic Community member states. In the 1980s, scheduled European air services showed all the characteristics of classic regulation: capacity division between designated carriers, route networks based on capital cities, widespread pooling of services, high fares dictated by IATA, and new entries blocked by restrictive national licensing (see Lyth, 1997, p. 166). However, with the general goal to harmonise the flow of goods, persons, services and capital among the member states, as well as the unification of economic structures within the EEC, the air transport industry would be affected by liberalisation efforts sooner or later.



The statutory environment in developing a common European market was certainly one motivation to deregulate air traffic. On the other side, market players in the late 1970s started to demand changes in the antiquated industry. With non-scheduled carriers taking an increasing share of the intra-European holiday traffic, and growing customer dissatisfaction and concerns regarding tariffs, service provision and quality, the regulatory environment was under threat.<sup>10</sup>

### 2.5.2.1 Historical Succession

The 1957 Treaty of Rome<sup>11</sup> formulated a joint traffic policy, since a common economic development could only be achieved by harmonising the flow of persons and goods within the member states of the then European Economic Community (EEC). Articles in the treaty explicitly specified general conditions for road and rail traffic as well as inland waterway traffic. Air traffic, however, was not referred to (see Opitz, 1994, pp. 56-57).

Justification for this lack of specifications for air traffic mainly lay in the various nations' fear of losing national sovereignty, which, especially in the air transport markets, could be rationalised by a number of military considerations. Consequently, trying to reach an agreement on joint policies regarding air traffic was a troublesome experience for EEC members. This situation was worsened by the unanimity consensus rule in the European Contract, making compromises on policies almost impossible (see Woerz, 1996, p. 100).

Air traffic in Europe consequently remained regulated by individual member states for years to come. A first step towards a gradual change in Community-wide air transport policy was reached in 1973. In this year, the European Court of Justice's ruling on the "Seamen Case"<sup>12</sup> stated that the Rome Treaty had to be applied to all industries, generally and without exception (see Reckewerth, 1993, p. 100). In essence, the basic Community principles of the free flow of goods, service, capital and labour had to be unconditionally implemented in the air transport industry as well.

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<sup>10</sup> In 1983, average fares within Europe were nearly twice as high as equivalent rates in the USA (see Lyth, 1997, p. 166).

<sup>11</sup> The Treaty of Rome was signed on March 25<sup>th</sup>, 1957 and is the founding document of the European Economic Community (EEC).

<sup>12</sup> The seamen case was a lawsuit between the European Commission and the French Republic. Based on the French "Code du Travail Maritime" of 1926, a 1960 ministerial decree stated that certain senior jobs on French ships were only available to French citizens. Other seamen were to be appointed following a quota of 3 French citizens to 1 non-French citizen (see Reckewerth, 1993, p. 98). This contravened European Law as laid out in the Treaty of Rome.



In 1979, the European Commission published a memorandum which, based on the Seamen Case, specified certain aspects in order to harmonise air travel in Europe. It stated that an intra-European air transport network had to be established without national market entry barriers, in order to offer passengers efficient service and competitive fares. Secondly, operating costs of carriers had to be generally lowered to enhance productivity, while also considering the immediate needs and interests of employees. The last aspect of the memorandum was the assertion that all these changes were to be implemented to enhance the social welfare and the standard of living of a wide range of society (see Woerz, 1996, p. 101). These conceptions - revolutionary for European dimensions at the time - led to various discussions regarding air transport policy in the integrated European market between the parties involved. However, these novel air traffic liberalisation conceptions had only been formulated in a memorandum and thus were not legally binding (also see Opitz, 1994, pp. 60-61 and Piepelow, 1997, pp. 95-96).

A milestone in liberalisation was the court ruling in the “Nouvelle Frontières” case.<sup>13</sup> The European Court ordered that the competition rules of the EEC treaty had to be applied to civil air transportation as well. This treaty was a change and an amendment to the Rome Treaty and formed the bedrock for liberalisation by generally agreeing on an internal European market. As of January 1<sup>st</sup>, 1987 the ruling became legally effective with the EC Treaty. Additionally, it was settled that agreements of the Minister’s Council did not need a unanimity consensus, but a qualifying majority, which decreased the decision-blocking power of protectionist member states (see Steininger, 1999, p. 39).

### **2.5.2.2 Liberalisation Packages**

The amendment to the Treaty of Rome had a major impact on the applicability of European law to air transportation,<sup>4</sup> without having any direct liberalising or deregulation effects. The European Commission therefore had to work specifically on deregulating the European aviation market. Having observed the radical changes in the US American aviation market and the consequences for passengers as well as for airlines, member states of the European Community decided on a more gradual approach, without major upsets, towards liberalising

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<sup>13</sup> The “Nouvelle Frontières” lawsuit was a case between the French Republic and air transport operators as well as travel agencies, one of which was called “Nouvelle Frontières”. The defendant was accused of selling tickets without prior approval by the French Ministry of Civil Aviation and thus had violated the French “Code de l’Aviation Civile”. The French court of law ruled that tariff approval would lead to price fixing and would therefore contravene EEC law. The European law agreed to that line of argumentation and ruled that the European Competition Law had to be applied to the air transportation sector as well (see Reckewerth, 1993, pp. 103-105).



the aviation markets, in order to find the correct balance between competition and control mechanisms.

#### **2.5.2.2.1 The First Liberalisation Package**

The first air transport liberalisation package in Europe came into effect in 1988 for an interim period of three years and dealt with issues covering the following areas in four acts:

- Market entry and capacity allocation for scheduled carriers
- Tariff regulations
- Rules regulating competition between airlines
- Exceptions to the rules regulating competition between airlines (see Opitz, 1994, p. 65)

These first deregulation efforts only affected intra-EC member traffic, thus leaving out domestic as well as international traffic between member states and other countries. Also untouched was a nation's relationship with its locally registered airlines (see Opitz, 1994, p. 65).

The act referring to the exceptions to rules regulating competition, empowered the European Commission to exempt certain co-operation and co-ordination actions from laws regulating competition - the so-called group exemptions. The first provision of the act exempted capacity co-ordination, profit-sharing, consultation between carriers regarding tariffs and co-ordinated slot allocation from the rules of competition. The second provision dealt with joint procurement, operation and sales of CRSs. The third provision was the exemption of joint aircraft ground handling services from the rules of competition (see Woerz, 1996, pp. 104-105). Furthermore, the Commission was the only body competent to deal with transactions falling within the scope of the EC Merger Regulations (see Stragier, 1999, p. 2). The rationale behind the exemption period was to give airlines the opportunity to adjust to the new market environment without endangering them financially (see Opitz, 1994, p. 66).

Tariffs in the first liberalisation act still had to be approved by both the origin and the destination country of the flight - the so-called double approval (for double approval, disapproval etc., see N/A, *Tarifklauseln im internationalen Luftverkehr*, 2000). A new detail was the introduction of tariff flexibility zones, allowing carriers to introduce multi-tier tariff systems on the basis of reference fares. As a result, rebated fares with a discount of 10-35% (discount fare) of the full reference economy fare and an even higher rebate of 35-55% (super discount) could be offered and were automatically approved. The drawback of these fares

from a customer perspective was that they were linked to certain restrictions like advance-booking periods or minimum/maximum stay-away periods. The setting of reference fares by state authorities was not without criticism, since flag carriers were, through their equity situation, very closely linked to the national traffic and tariff authorities. However, the overall approach to have fares set through deregulated authorities was seen as the first step to liberalising pricing in air transportation in Europe.

Capacity restrictions and market entry barriers were also loosened in the first liberalisation package. Inventory with less than 70 seats was no longer part of any capacity restrictions, as long as it did not involve traffic between primary hubs (category 1 airports) (see Piepelow 1997, p. 102).

Up until the new ruling, bilateral agreements between nations only allowed a pro rata (50:50) allocation of capacity for the nations involved. The first liberalisation package allowed for a successive change of the ratio to 55:45 and, in a following step, to 60:40 in favour of the designated carriers, in order to ease market access. Market entry was further facilitated since multiple carriers designations were allowed on routes with a justifying passenger volume. Prerequisite for multiple designations was a minimum traffic volume on the respective routes. In 1988, this minimum threshold to allow multiple designations was 250,000 passengers per year, which was later lowered to 200,000 in 1989 and 180,000 in 1990 (see Opitz, 1994, pp. 66-67).

Traffic carrying passengers and goods to and from the carrier's home country (3<sup>rd</sup> and 4<sup>th</sup> freedom traffic, see excursion on freedoms of the air paragraph 2.5.4) was allowed between primary hubs and regional airports. In addition, airlines were granted rights to carry traffic to and from third countries en route (5<sup>th</sup> freedom rights, see below), provided that a regional airport (not a category 1 airport) was being used and that the carrier did not utilise more than 30% of its total capacity on the route (see Opitz, 1994, pp. 66-67). The 5<sup>th</sup> freedom traffic between primary hubs (category 1 airports) was, however, not allowed (see Piepelow, 1997, p. 102).

To summarise, the first liberalisation package was less of a revolutionary set of reforms than a new concept, leading the way to more liberalisation. The US American market experience certainly had an impact on the intensity of the liberalisation process in Europe, resulting in a rather prudent approach. On the other hand, nations still wanted to ascertain that their



individual airline industry was left with sufficient time to prepare for the new, liberalised markets.

#### **2.5.2.2.2 The Second Liberalisation Package**

The first package of reforms was modest and insufficient for the commitments associated with the agreement to move to a single market (see Button, *Liberalising European Aviation*, 1996, p. 282). Following the gradual liberalisation approach, the second liberalisation stage was ratified by the Ministers' Council of the European Community in 1990.

The system of tariff approval remained unchanged, but the flexibility zones were further widened to 3 sections with a larger range of discounts. For tariffs of more than 105% of the reference rate, nations used the double disapproval system, by which the tariff of an applying carrier was approved automatically unless two member nations disagreed. This new approval system was proposed by the European Commission and had about the same effect as the single approval concept that was used in bilateral agreements based on the country-of-origin procedure.<sup>14</sup> Automatic approval was also granted for discount and super discount tariffs, which could lie between 80% and 94% (discount zone) and 30% and 79% (deep discount zone) respectively (see Opitz, 1994, p. 69). The new system generally allowed carriers to set their tariffs more freely without having to face regulatory constraints. In principal, tariffs could only be approved once they reflected the cost structure of the applying airline, taking into consideration an adequate return of the invested capital and leaving enough financial resources to ensure appropriate safety and security standards (see Piepelow, 1997, pp. 105-106).

Capacity restrictions and market entry were loosened for multiple designations by increasing capacity - based on the 60:40 capacity allocation - by 7,5% from timetable period to timetable period (see Opitz, 1996, p. 69 and Woerz, 1996, p. 106). However, the European Commission maintained the right of restriction if capacity increases threatened member states' carriers financially. To support route development and to promote regional airports, air transport between regional airports was excluded from any form of capacity regulations (see Opitz, 1994, p. 69).

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<sup>14</sup> The single approval or country-of-origin procedure describes an approval concept with tariffs being approved if the originating state approves them (see Woerz, 1996, p. 12).



To lower market entry barriers, carrier designation was subject to further liberalisation. Multiple designations were permitted, provided that in the previous timetable period 140,000 passengers were carried on a certain route, or if 800 return flights were operated. These figures were further lowered to 100,000 passengers and 600 return flights in 1992.

Traffic to and from the carrier's home country (3<sup>rd</sup> and 4<sup>th</sup> freedom traffic, see below) was no longer limited to categorised airports, but was allowed to all airports in the EC. The possibility of operating services to and from third countries en route (5<sup>th</sup> freedom rights, see below) was not linked to the usage of regional airports, and capacity for the 5<sup>th</sup> freedom traffic was increased from 30% to 50% (see Optiz, 1994, p. 69).

Group exemptions as described for the first stage of liberalisation were still in place, but slightly altered. Freight traffic was added, and the possibility of receiving group exemption prolonged until 1992. Price fixing was only allowed in connection with interline agreements and the transparency of airport slot allocation had to be enhanced, whereby new entrants received priority treatment.

#### **2.5.2.2.3 The Third Liberalisation Package**

The third liberalisation stage comprised three provisions and came into effect on January 1<sup>st</sup>, 1993. The provision regarding traffic licences harmonised technical, financial and formal approval and continuance of the restricted admission of air transport companies by EC member nations (see Niejahr, 1998, p. 7). However, a traffic licence did not automatically result in airline traffic rights or rights to enter a specific market. Discrimination of airline owners based on nationality was formally abolished as long as an airline owner was an EC citizen. This meant a shift from national ownership clauses to community ownership clauses (see Opitz, 1994, pp. 70-71, Woerz, 1996, p. 108, Steininger, 1999, p. 43).

Designation was completely eliminated as a restrictive factor for all flights in the European Community and capacity restrictions between member nations were also removed. With the exception of granting a foreign airline full access to the national market (8<sup>th</sup> freedom traffic, see below) and certain airports, all freedom traffic became permissible with the third liberalisation package (see Piepelow, 1997, p. 108). However, the European Commission was allowed to freeze a financially endangered airline's capacity temporarily (Woerz, 1996, p. 109). Until March 1997, the 8<sup>th</sup> freedom rights were restricted to 50% capacity and the 8<sup>th</sup> freedom routes had to be an extension of an international route. Full 8<sup>th</sup> freedom traffic in the



Europe Union was only allowed from April 1<sup>st</sup>, 1997 (see Woerz, 1996, p. 109 and Steininger, 1999, p. 43).

Tariffs for scheduled services, non-scheduled services and freight traffic were not subject to any form of approval. Nevertheless, the Commission and the member nations retained a veto right to block excessively high or low fares. Consequently, member nations could block tariffs that were disadvantageous for the travelling public. A veto could also be executed for low tariffs that were below seasonal fare fluctuations and could possibly impact negatively on operating carriers on routes or a bundle of routes (see Opitz, 1994, p. 72). The provision indicating that price leadership was only allowed for carriers of member nations was protective in character. Any foreign carrier intending to offer lower fares or new services was not allowed to do so (see Woerz, 1996, p. 110). This left regulating European authorities with a tutelary power and some authors consequently talked of the "Fortress Europe" in the context of its obstinate refusal to open markets to international competition (see Woerz, 1996, p. 110).

All airline competition regulation laid out in the third package had to be applied within nations as well. Group exemptions were still exercised, however, excluding co-operation and co-ordination in ground handling services (see Woerz, 1996, p. 111).

A further important aspect of the act was the right of airlines to combine services and offer them under one flight number. Lufthansa, for example, could offer a service from Munich to Milan and from there with Alitalia onwards to Rome without the need to change the flight number, thus suggesting a non-stop service. This so-called codesharing (see below for a detailed discussion) was obviously an important factor for the presentation of connections in CRSs, as non-stop flights were indicated higher on the screen than connecting flights.

In summary, the third liberalisation package opened the doors for a truly deregulated European air transportation market. Market entry and tariff agreements were liberalised. Deriving from the initial negative experience with the US deregulation, European legislators still endowed individual nations with veto rights and certain protection tools to avoid price wars. The 8<sup>th</sup> freedom traffic - at least theoretically - allowed any European carrier to operate in the entire EU (see Opitz, 1994, p. 73).

The following table summarises key issues of the European liberalisation packages.



Table 2.5: Progression of European Liberalisation Packages

Liberalisation Area	Initial Status	First Liberalisation Package	Second Liberalisation Package	Third Liberalisation Package
TARIFFS	Bilateral approval through nations	Automatic approval of flexibility zones based on a reference tariff Discount: 65-90% Super Discount: 45-65%	Automatic approval of flexibility zones based on a reference tariff Discount: 80-94% Super Discount: 30-79% Regular Economy: 95-105% Full Flexible: more than 106%	No more tariff approval required Countries are allowed to block tariffs in cases of predatory pricing or excessively high or low prices
MARKET ENTRY				
• Bilateral Traffic	One carrier from each country	Multiple designation for routes with a minimum passenger volume of 1988: 250,000 1989: 200,000 1990: 180,000	Multiple designation for routes with a minimum passenger volume of 1991: 140,000 1992: 100,000	Free market entry with limited Commission rights
• 5 <sup>th</sup> Freedom Traffic	No regulations, not allowed	Up to 30% of capacity, provided a regional airport is involved	Up to 50% capacity	Free market entry with limited Commission rights
• Cabotage <sup>1</sup>	No regulations, not allowed	No regulations, not allowed	No regulations, not allowed	Up until March 31 <sup>st</sup> , 1997 50% capacity of flights as an extension of an international flight As from April 1 <sup>st</sup> , 1997 free market entry
• Capacities	Pro rata (50:50)	1988: up to 55:45 1989: up to 60:40	1991: up to 67,5:32,5 1992: up to 75:25	No more restrictions
COMPETITION REGULATION	Highly regulated	Group exemptions for -Capacity co-ordination -Tariff consultation -Slot allocation -Joint CRSs -Ground handling -Pool revenue sharing	Group exemptions for -Capacity co-ordination -Tariff consultation -Slot allocation -Joint CRSs -Ground handling	Group exemptions for: -Schedule co-ordination -Tariff consultation -Slot allocation -Joint CRSs -Joint service on low-volume routes
LICENSING OF AIRLINES	National regulation	National regulation	National regulation	Claim to be licensed if: -Majority ownership by EU citizen -Sound financial basis -Compliance with security standards

<sup>1</sup> Cabotage or the eighth freedom describes the permission to carry traffic between two points within a foreign nation.  
<sup>2</sup> Capacity generally describes the number of an aircraft's seats multiplied by the frequency of operation in a given period. The capacity ratio outlines the maximum capacity spread between designated carriers in ASA.

Source: Piepelow, 1997, p. 110 and own amendments

2.5.2.3 Critical Issues of European Deregulation

By 1997 deregulation within the Europe Union was complete. Fixed fares were eliminated, European airlines were given access to all European airports, and received the freedom to operate within any European country and between any two European countries.

A negative aspect of European air transport market liberalisation is still group exemption rules that legalise potentially anti-competitive behaviour. The underlying motivation - to ensure sustainable market performance (particularly for struggling airlines) and to endow carriers with the possibility of market entry - has never been achieved. Major group exemptions have been granted for airline alliances involving flag carriers. Despite the Commission's policy to exempt restrictive alliances if it considers that the economic



efficiencies and overall benefits of the transaction outweigh the anti-competitive effect, there is still room for market privileges for the beneficiaries (see Stragier, 1999, p. 2).

The position of national flag carriers has legally also not been touched in any of the liberalisation packages. Although there is decreasing state involvement in flag carriers, some of the big European airlines still receive financial, infrastructure and tax benefits. In a statement, for example, the French Ministry of Industry denied any intentions to relinquish its 53% stake in Air France in early January 2001.

Despite deregulation, the common European air transportation system does not necessarily allow for the proper functioning of a single market. Different airport slot allocation systems (see 3.2.5.1.2) and the negotiation of bilateral agreements covering access to non-EU markets do not guarantee common traffic standards and market conditions in the EU. Each member still negotiates its air service agreements with non-EU members on an individual basis, while some of these agreements even violate European competition law. The violation results from the cumulative effect of a series of bilateral government-to-government agreements, particularly those granting US carriers access to the EU market. This is to the detriment of those carriers whose host governments do not enjoy bilateral agreements with the USA, and thus contravening the EU rule of free and fair competition for all EU airlines (see Woerz, 1996, p. 115 and The European Commission, 1998, p. 2). A consequence of the bilateral agreements is that European airlines can, in most instances, not fly to non-member countries from any point in the EU, but only from their home member state territory. In contrast, e.g. US airlines can operate services from whatever airport in the US to a wide range of airports in different EU member states.<sup>15</sup> This might lead to competitive imbalances between European and US-based airlines, and also to joint decisions based on factors other than corporate strategy (see Howarth and Kirsebom, 2000, pp. 46-47). In 1998, the European Commission thus launched legal proceedings against the eight existing open-skies deals the USA has with EU countries, on the ground that they are against EU single market rules (see The European Commission, 1998, p. 2). The findings are expected by late 2002.

Another negative aspect evolving from European deregulation is the fact that air traffic control (ATC) in the integration region has not been harmonised. This leads to friction within the control systems and consequently to delays at main airports that operate far above their

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<sup>15</sup> Provided that underlying traffic rights exist.



maximum capacity. The entire complex of ATC, airport operations (including capacities, processes, finance and fiscal issues, noise emission control, and operation-time restrictions), ground services and slot allocations needs to be harmonised in order to implement deregulation (see Bittlinger, 1998, pp. 45-52). These related services pose a crucial limiting factor on an EU airline's operational possibilities and only EU-wide harmonisation can lead the way to a true single market.

### 2.5.3 Air Service Agreements

The existence of many different nationalities among players in the global air traffic industry has influenced the bilateral bargaining process according to which countries exchange route traffic rights with each other. The era of bilateralism began when the USA and Britain met in Bermuda in 1946 to discuss rulings for their air traffic relationship (see Abeyratne, 1996, p. 805). What followed was a web of rules and regulations, pacts and agreements covering the entire international airline industry.

Prior to European deregulation, the member states of the then EEC and EC did have mutual agreements to regulate air traffic in the Community. With the third liberalisation package, agreements of this kind became obsolete. But still, outside the EU, negotiations between nations for air traffic regulation purposes are a reality of the air transport business. The resulting air service agreements (ASA) are signed more or less as international treaties on a bilateral basis and usually determine the following:

- Routes, i.e. which routes can be served between the countries and to third countries
- Designations, i.e. how many airlines from each country can serve these routes
- Ownership (of airlines)
- Capacities and how frequently flights can be offered
- Tariffs, i.e. whether the fares airlines charge need government approval (see United States General Accounting Office, 1995, p. 11)

First, the routes that may be served by the airline(s) of the negotiating nations are specified. The nation then designates or licenses one or more carriers operating on the appointed routes (for designation of airlines in ASA, see Scott, 2000, p. 96). Many bilateral agreements additionally include specifications covering foreign ownership of a national airline. This is to



avoid an airline still enjoying traffic rights under a bilateral agreements when its national ownership structure has changed.<sup>16</sup>

Bilateral agreements also determine carriers' capacities, and rules to regulate tariffs are being negotiated. Capacity in most agreements is either of the "Bermuda type" (free determination) or predetermination<sup>17</sup> (see Scott, 2000, p. 96). The Bermuda type describes the absence of control of frequencies or capacities on routes between the two contracting countries. However, a protection of capacity allocation has been added to the original Bermuda Agreement. If a carrier sees its interests adversely affected by the frequencies and capacities of the other airline, there may be an ex post facto review of capacity and if required, an alteration (see Doganis, 1986, p. 28).

Tariff regulation by most nations has been delegated to IATA. In the Bermuda Agreement of 1946, which acted as a model agreement for various other bilateral air service agreements, IATA was commissioned to regulate tariffs at tariff conferences (see Abeyratne, 1996, p. 806). The process of setting tariffs was regulated by IATA in such a way that direct competition between carriers could be avoided (in most instances). However, tariffs still have to be approved as part of ASA. In most instances, this is done by using what is called "limited disapproval". This term subsumes dual disapproval and tariff acceptance within specified price zones (see Scott, 2000, p. 96).

The following is an exemplary table of contents of an air transport agreement between the Federal Republic of Germany and any other nation (see N/A, Luftverkehrsabkommen, 2000).

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<sup>16</sup> However, anomalies do apply, e.g. Spanish Iberia's majority shareholding in Aerolinas Argentinas did not affect the bilateral status of the carrier, since the bilateral partners continued to accept the carrier as the Argentinean designated airline (for more anomalies see Doganis, 2001, pp. 46-51).

<sup>17</sup> Free determination allows for a totally free handling of capacity, frequency and equipment used by the contracting states. Predetermination specifies capacities.

Table 2.6: Air Service Agreement Content

Article 1: Definitions
Article 2: Grant of Traffic Rights
Article 3: Designation and Operating Authorization
Article 4: Revocation or Limitation of Operating Authorization
Article 5: Non-discrimination in respect of Charges
Article 6: Exemption from Customs Duties and other Charges
Article 7: Transfer of Earnings
Article 8: Principles Governing the Operation of Air Services
Article 9: Communication of Operating Information and Statistics
Article 10: Tariffs
Article 11: Commercial Activities
Article 12: Aviation Safety
Article 13: Aviation Security
Article 14: Examination of Travel Documents and of Inadmissible Persons
Article 15: Exchange of Views
Article 16: Consultations
Article 17: Settlement of Disputes
Article 18: Multilateral Conventions
Article 19: Registration with the International Civil Aviation Organization and with the United Nations
Article 20: Previous Agreements
Article 21: Ratification, Entry into Force, Duration
Article 22: Termination

Source: N/A, Luftverkehrsabkommen, 2000

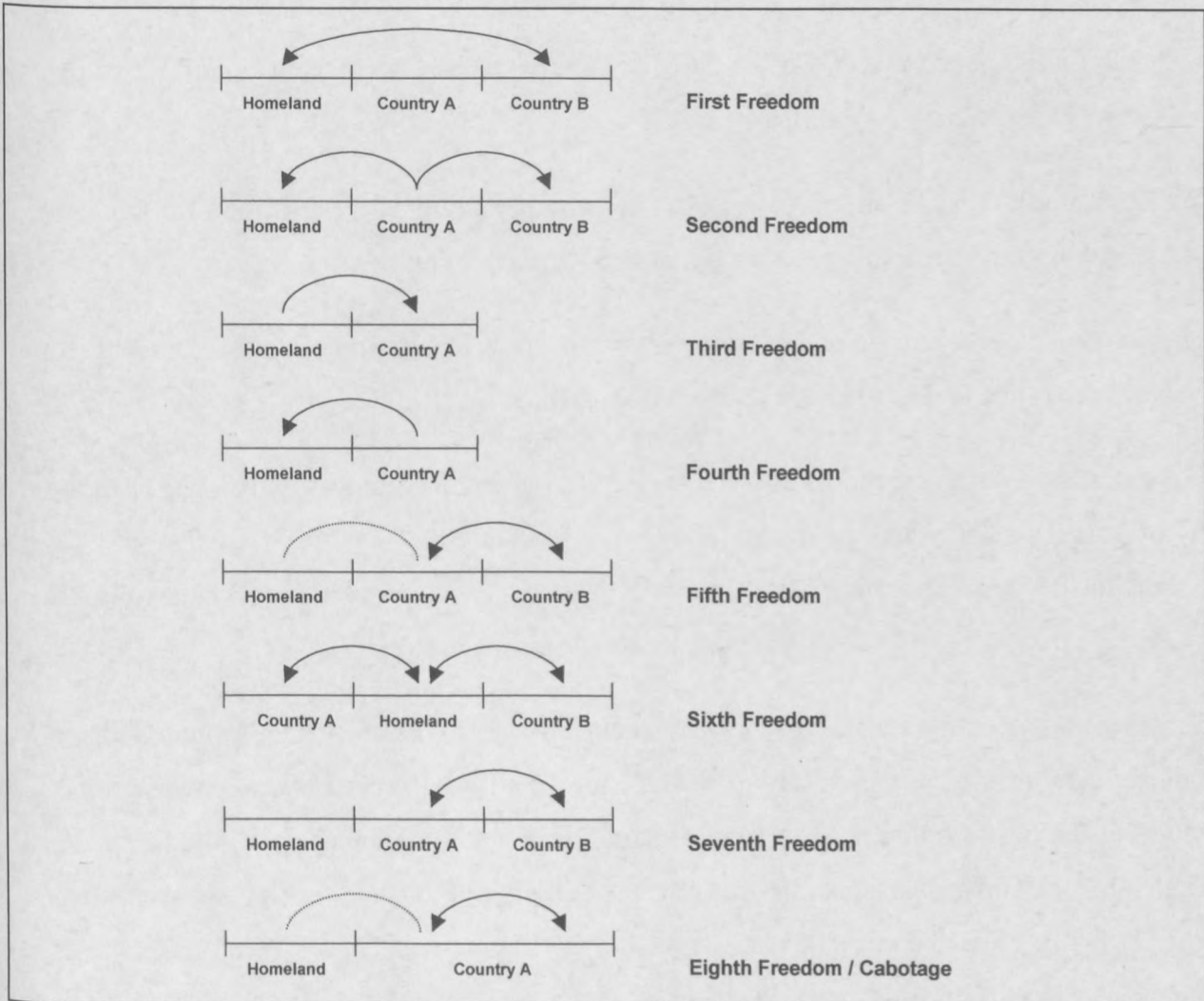
Until recently, bilateral focus was on travel between the countries that were signatory to a particular bilateral agreement, augmented by limited ability to serve beyond points. However, individual airlines and airline networks require market access not just between two countries, but also to catchment markets behind one or both countries. The general notion of ASA is thus that these agreements are bilateral, although air traffic involves the connection of multiple, international points (see United States Department of Transportation, 1999, p. 4). This calls for a further challenge of the legal and infrastructure constraints.

**2.5.4 Excursion: Freedoms of the Air**

Air service agreements or bilaterals are negotiated by governments within the framework of freedoms of the air. The following figure depicts the freedoms, which are subsequently described.



Figure 2.6: Freedoms of the Air



Source: Pompl, 1998, p. 299

The freedoms visualised above are rather self descriptive. The five basic freedoms were defined in Chapter II of the Chicago Convention of 1944 and came into force on April 4<sup>th</sup>, 1947 (see Convention on International Civil Aviation, 1944, Chapter II). Participating governments then negotiated the exchange of standard traffic rights. The Chicago Convention managed to transform the dogma of unrestricted national air sovereignty into a more specific set of codes guaranteeing access to foreign air space on a scale of increasing commercial value (see Lyth, 1997, p. 157). These traffic rights are usually exchanged on a reciprocal basis. The following describes different freedoms of the air.

- First freedom: overflying rights
- Second freedom: rights to land for technical reasons
- Third/fourth freedoms: carry traffic to and from the home country
- Fifth freedom: carry traffic to and from third countries en route

A freedom which has neither been recognised nor designed in the Chicago Convention is the

- Sixth Freedom: carriage of traffic between two foreign nations via the nation in which the carrier is registered (see Hanlon, 1996, p. 74).

The sixth freedom traffic in this respect can be seen as an altered form of the fifth freedom traffic as origin and destination are not the country of registration.

The seventh and eighth freedoms were also not specified in the Chicago Convention. However, they are subject to bilateral air service agreements

- Seventh freedom: a carrier is allowed to operate stand-alone services outside the territory of its home country and to carry traffic between two nations.
- Eighth freedom: an airline has permission to carry traffic between two points within a foreign nation. This is more commonly known as cabotage.<sup>18</sup>

Cabotage describes air traffic on domestic routes. These rights are generally reserved for national carriers and are only rarely granted to foreign airlines. Services between the grantor nation of the traffic right and its overseas territories or former colonies, (e.g. UK-Bermuda, France-French Guyana) are also included in this definition. Cabotage restrictions were lifted in 1997 by the third liberalisation package within the EU and cabotage is the ultimate aim of global air transport liberalisation.

### 2.5.5 European-US Bilaterals

The US-Netherlands aviation market was one of the fastest growing markets in the world in the mid to late 1990s. The exceptional growth rates were largely attributed to the Netherlands' longstanding liberal aviation relationship with the USA, which lead it to become the first European country to sign an "open skies agreement" with the USA in September 1992. In brief, the key elements of this liberal bilateral agreement are (see Doganis, 2001, p. 32):

- Open route access - airlines from either country can fly to any point in the other with full traffic rights
- Unlimited fifth freedom rights
- Open access for charter carriers
- Multiple designation of airlines

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<sup>18</sup> The term cabotage is French and means "coastal shipping".



- No frequency or capacity control
- No tariff controls (except if tariffs are too high or too low)
- Airlines are free to codeshare or to make other commercial agreements

Deregulating markets and providing national airlines with the possibilities to form collaborations with competitors are ways of gaining open skies agreements from foreign governments. In return for allowing the Dutch carrier KLM to join forces with the USA's Northwest Airlines, the US DOT won agreement from the Dutch government for US airlines to serve the Netherlands and to carry Dutch traffic to points beyond the Netherlands (see Miller, 1997, p. 65).

With the evident benefits of the US-Netherlands ASA and the KLM-Northwest alliance in focus, nine smaller countries (Austria, Belgium, Denmark, Finland, Iceland, Luxembourg, Norway, Sweden and Switzerland) all signed open skies agreements with the US in 1995.

The USA and Germany had been liberalising their markets since, in September 1993, signing a Memorandum of Consultation (MOC) that aimed to achieve open skies by November 1997. The open skies agreement was initialled in February 1996 when United Airlines and Lufthansa applied for antitrust immunity in the USA to allow an expanded alliance (which became the Star Alliance in 1997). Antitrust immunity was granted in the USA in November 1996, which in turn facilitated the official signing of the ASA (see also Sacher, 1997). Surely the most important aspect of the open skies agreement between Germany and the USA was the granting of free market access for airlines of both nations to all destinations, either through individual services or codesharing operations (see N/A, *Deutsch-amerikanische Abkommen im Luftverkehr*, 1996, p. 6). Despite the limited annual capacity additions permitted since the signing of the MOC, growth in the US-Germany market has been rather lacklustre in recent years (see more in Nuutinen, 1997, pp. 5-6, also see there for more history and ASA's for other regions in Europe).

The Association of European Airlines (AEA) has a policy statement proposing the Transatlantic Common Aviation Area (TCAA) and therefore calls for further multilateral liberalisation in aviation. This would include a full harmonisation of the US and the EU skies, a relaxation of regulatory barriers, a complete overhaul of airline ownership restrictions and the establishment of a single, treaty-backed governing body. The USA, however, seems to be reluctant to embrace the European TCAA proposal, thereby lifting limits on the 8<sup>th</sup> freedom traffic and ownership rules. From the governmental side, union opposition is the most



commonly cited reason for this reluctance (see Walker, *Worlds Apart*, 2000, p. 29). AEA's objective is to replace the current fragmented (since it is nationally controlled) regulatory regime with a unified system that gives airlines full commercial opportunities. There is, however, a proposal that their activities be governed by a common body of aviation rules, thereby avoiding unnecessary regulation. This proposal was also backed by the EU Transport Commissioner and is being discussed at high levels both in the USA and in Europe.

### 2.5.6 Critical Aspects of Global Deregulation

The above-mentioned deregulation efforts in the US and Europe are limited to geographical regions. Traffic between those liberalised regions and beyond is, in most cases, still subject to bilateral agreements. Considering the increasingly global nature of the airline industry, the current status of liberalisation is not satisfactory and, from a European perspective, most likely not keeping with common European law (see above and The European Commission, 1998). The ultimate goal of airline liberalisation must be open skies agreements between individual nations or groups of nations and integration regions, giving airlines full access to one another's markets.<sup>19</sup>

The USA signed their first open skies agreement with the Netherlands in 1992, an action closely linked to the granting of antitrust immunity to the partnership between KLM and Northwest (see United States General Accounting Office, 1995, p. 24). The US DOT links antitrust immunity to an open skies agreement between the home countries of carriers involved in a partnership. Antitrust immunity exempts airlines from US antitrust laws and allows them to co-ordinate tariffs, introduce joint FFPs, and to jointly negotiate with travel agencies and corporate clients. On the whole, antitrust immunity permits collaborating airlines to act as one entity.<sup>20</sup> It is, however, debatable whether the link between granting antitrust immunity and open skies agreements is necessarily economically sensible. Antitrust immunity, as a prerequisite for open skies, surely represents a final effort to maintain control of an industry that is otherwise liberalised. The proposed British Airways and American Airlines collaboration exemplifies the disadvantageous consequences of linking antitrust immunity and open skies. Since the two carriers have not as yet agreed to the conditions

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<sup>19</sup> By 2000 almost half of the world's traffic was moving in open markets, such as between North America and most of Europe, between North America and some countries in Asia, among the countries of Europe, within Oceania, and among many countries in the Americas (see Boeing Commercial Airplane Group, 2001, p. 38).

<sup>20</sup> The latest – January 2002 – partnership to receive antitrust immunity was Delta Air Lines and Air France, thus paving the way for an open skies accord between the USA and France.



associated with the granting of antitrust immunity, open skies between the UK and the USA is still pending - at the expense of other UK and US carriers serving the North Atlantic.<sup>21</sup>

However, even open skies only warrants partial deregulation of air traffic, since the USA does not grant 8<sup>th</sup> freedom/cabotage traffic to foreign carriers, which keeps them from operating domestically in the US. This means that European carriers cannot build an efficient feeder network in the US, whereas the US carriers, through the 5<sup>th</sup> freedom traffic, are able to set-up feeder services in Asia and Europe. National ownership clauses further inhibit total air traffic liberalisation. They stipulate that airlines must be substantially owned and effectively controlled by citizens of the designated nation. As a result of this regulation, an airline would lose its traffic rights if nationals from other than of the designated nation were to control the carrier. The same applies to minority share volumes that do allow for the execution of effective control. The USA has limited the control of a national carrier by foreigners to 25% and has ruled that the foreign equity stake must not allow foreigners to control the airline (see Steininger, 1999, pp. 48-49). As a result, international mergers and acquisitions have not yet taken place. To abolish the ownership clause, further deregulation on a multilateral basis will have to be accepted.

In the meantime, industry specialists call for a rapid solution to these problems by the establishments of bi-regional agreements or a "phased multilateralism", e.g. between the USA and Europe. The latter would establish agreements between a limited number of nations to commence a truly open market - other countries could follow successively, depending on their geographic disposition. The proposed TCAA is a step in the right direction and could serve, once implemented, as an example of open air transport market access between other regions.

Whether air traffic will ever be fully liberalised is an open question. The liberalisation trend in the telecommunication and energy industries advertises positive aspects in this regard. The current or next downward cycle could help alter the general attitude towards national ownership restrictions on mergers and acquisitions. Politicians will have to re-think policies when bankruptcy becomes the only logical alternative to an international merger. On the product side, deregulation did reach the intended goals. As a result of increased competition, air fares fell and the productivity of airlines increased. Frequencies grew and smaller cities and regions were added to the air transport network. A disadvantage of growth is the resultant

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<sup>21</sup> British Midland, the UK's second largest carrier wants the EU to take action against the restrictive, anti-competitive situation on the North Atlantic markets, which impedes the carrier from entering UK-USA services.



overcrowded airports, since airport development did not adequately follow growth trends in air transportation.

### **2.5.7 Implications of Deregulation for Airline Partnerships**

In the long regulation phase, airlines did not regard co-operation as a competitive measure. The regulative systems and state protectionism left enough room for business survival and modest development. Despite constant losses, airlines found themselves in a secure environment of state funding and subsidies as well as competition control.

Deregulation became one of the main drivers for airlines to become involved in partnerships. Liberalisation gave way to a whole new set of competitive actions and operational performance options. With bans on capacity, frequencies and designation lifted, carriers could engage in more competitive action. Deregulation and liberalisation did not, however, open the global aviation industry in ways other formerly regulated industries had. With ASA constraints against expanding market coverage, airlines have increasingly chosen to co-operate horizontally in order to overcome regulatory hurdles as well as organisational development repression. Alliances have provided a way for carriers to mitigate the limitations of ownership restrictions, licensing and control regulation. This led to the paradox that deregulation promoted horizontal airline co-operation to help leverage their position, but at the same time, partnering was initially used to overcome still existing regulations.

On the other hand, alliance building as a consequence of liberalised markets is often seen as a threat to free market competition. The disappearance of regulatory constraints increases competition between market players, but simultaneously the risk of anti-competitive behaviour grows. European authorities especially, feeling somewhat threatened by US airlines and policies, are calling for a competition policy which prevents regulatory barriers being replaced by anti-competitive agreements between airlines and airline networks respectively, which significantly reduce or eliminate the benefits of liberalisation (see Stragier, 1999, p. 2).

Clearly, airline deregulation has driven collaboration but has not led to the same set of corporate co-operation opportunities given to, for example, other global network industries such as energy and telecommunication. In this respect it is questionable whether international or at least regional deregulation equals market liberalisation. However, the airline industry is on the cutting edge of becoming a truly global business.



## 2.6 Summary and Implications

The above has elucidated the status, developmental trends and the track from regulated to more deregulated and liberalised air transport markets. Most of the aspects are highly significant for the future development of international air transport towards an increasingly global and liberalised industry sector.

Decreasing yields, geographically fragmented, cyclical market development and further deregulation therefore precipitate advancement and give rise to new competitive structures and propagate nations' new policies in dealing with their air transport sector. The last quarter of 2001 spurred this development - in particular in Europe - with an even more market-focused approach towards the airline industry emerging. On the other hand, it has also illustrated actions governments take in order to protect and maintain their national airline industry. The drastic shifts in the air transport business after September 11<sup>th</sup>, 2001 have illustrated two separate ways of dealing with the seemingly liberalised industry to redress extreme economic problems. While Europe has executed a strict hands-off policy, banning any direct state subsidies, the USA has provided its airline sector with a relief package of USD 15 billion. The advantages and disadvantages of both approaches are arguable, although state subsidies seem an anachronism in a supposedly deregulated and liberalised industry, which should ideally operate in free market circumstances and move to global consolidation.

The key elements in the airline industry's evolution have been government regulation and, more recently, deregulation. Governments around the world generally continue to reduce their regulatory roles in air transportation, a trend predicted to continue in the future. Deregulation as such allows market forces to control the interaction of all players in an industry and fosters development of new business models. It is in deregulated markets that interairline partnerships and low-cost air transport emerge, which offer new product variations, can better meet passenger demands and induce air travel. In order to become and stay competitive and provide passengers with efficient, affordable air travel, airlines need to engage freely in network development - also across national borders. The results of further deregulation will be vigorous competition triggered by new entrants, exits by unprofitable carriers, and execution of partnership strategies. Incumbent flag carriers will only be able to weather these challenges once nations abstain from their financial involvement. Since privatisation of national carriers often requires capital beyond the capability of local financial markets, many nations are revising rules governing the level of allowable foreign investment, thus opening possibilities for further interairline capital linkages.



There is a world trend towards more liberalised air service agreements between countries. Historically, bilateral agreements placed restrictions on the number of carriers that could operate in a market and on the level of service they were allowed to offer. Many air service agreements negotiated in the past decade are open skies agreements, allowing carriers of each signing country to (mostly) offer whatever service they desire, fettered only by competition. Although restrictive bilateral agreements still exist, such as those between the United States and the United Kingdom, they are increasingly being renegotiated with added services. Ambitious proposals have been floated for wider liberalisation in future, such as between the United States and the entire European Union, or between the Asian and American regions. This supra-national negotiation of air service agreements is urgently required in order to migrate to maximised market liberalisation. Liberalising air travel between entire regions therefore best meets the demands of airlines to freely engage in feeder/defeeder services and to provide passengers with travel convenience.

However, while deregulation and liberalisation have become buzzwords during the past few years of passenger air transport development, their effects on development are ambivalent. Reasons that once motivated nations to regulate their domestic air transport and lead to the restriction of foreign air service providers entering a country, still prevent governments from taking the final step to full deregulation and liberalisation. Interestingly, gradual deregulation and liberalisation statutorily and organisationally provided air transport operators with the possibilities of establishing new business models, such as horizontal partnerships. At the same time, it made these inter-company actions absolutely necessary to circumvent continued restriction.

Both issues, deregulation and liberalisation, will continue their forceful impact on the development of passenger air transport. Globally, the airline industry needs to move away from unequal competition, resulting from some nations being allowed to protect their unprofitable carriers, as well as disproportionate competition when airlines cannot operate where and how they wish. It is clear that airlines operate within the limitations of the specific characteristics of the products/services they provide. Additionally, they must obey strict safety and environmental standards that are to be assessed and continuously controlled by national authorities or other independent bodies. However, the overall obligation of passenger air carriers is to operate business models that allow them to tackle the challenges emerging from their pervasive dependency on economic cycles, while safely and securely meeting passenger as well as public demands.



## 3 Passenger Air Transport - Competitive Structures and Product/Service Characteristics

### 3.1 Introduction

Chapter 2 primarily gave a quantitative and classifying description of the air transport industry, its main regulative impediments and developmental challenges. This information serves as a point of departure in studying critical issues in the air transport industry. The purpose of this chapter is to examine air transport competition structures as well as passenger airlines' particular product and service characteristics.

The shape of passenger air transport rivalry has naturally played an important role in the industry's development. When subject to regulation, the composition of competition between carriers and value chain providers was established to their common benefit, but to the detriment of passengers' needs. Then, deregulation reshuffled rivalry, and the new statutory circumstances continue to impact on the weight that specific competitive forces exert on participants in the air transport industry sector. New technologies and business models revolutionised air transportation in some parts and gave rise to developmental trends that were inconceivable some years ago.

However, air transportation operates within the constraints of the products and services it creates, and these characteristics are unchangeable. All models to increase competitiveness of air transportation, and to curb its sensitivity to economic cycles, must always work with these fixtures. In further advancing and modernising the air transport industry, it is certainly the regulative boundaries, but also these rules that continue to characterise development.

The examinations of this chapter are therefore focused on an endogenous industry perspective and deduce key bearings that induce the formation of interairline partnerships.

### 3.2 Air Transport Competitive Structures

Every industry has its individual structures, or is endowed with certain fundamental characteristics. Environmental conditions (technology, economy, society and the political framework) as well as the industry structure itself, determine the overall rules of competition and the strategic alternatives of a firm.

A very effective tool in diagnosing airline competition and the attractiveness of the airline industry as such is Porter's Industry Analysis, which is used to structure the succeeding

sections (see Porter, 1980, pp. 3-5 and Porter, 1985, p. 6). There are, of course, a number of other approaches and models, but for the airline industry, this is still the most accepted and relevant approach to use (for other sources using this approach, see e.g. Diegruber, 1991, Steininger, 1999, Netzer, 1999). According to Porter's analysis, the attractiveness of an industry is determined by the following factors:

- Intensity of rivalry and competition, i.e. between established companies in an industry
- Threat through potential new entrants determined by entry barriers
- Threat of substitute products or services
- Bargaining power of suppliers
- Bargaining power of buyers (i.e. passengers)

It becomes evident that competition in an industry is not only determined by the competitors themselves, but by other forces as well. The collective strength of these factors determines the profit potential of an industry. In the following sections, factors influencing the intensity of competition in global aviation are introduced and discussed.

### **3.2.1 Competition Between Established Airlines**

Presently, the intensity of competition between established carriers in the main city pair markets can be described as very fierce. Certainly, some markets are serviced by monopolies, while others such as the attractive North Atlantic and Asian intercontinental and continental connections as well as many domestic connections, are highly competitive. While in the era of pre-deregulation, airlines operated in a protected environment, market forces are currently affecting carriers more seriously and leading to more intense rivalry. Components of airline competition intensity are determined by the following factors (see Jäckel, 1991, p. 253):

- The total number of airlines and their equipment represent an oligopolistic competition structure.
- The transportation product is generally homogenous and perceived to be a commodity, thus product differentiation is complex.
- A high percentage of fixed costs calls for an optimised utilisation of capacities, i.e. achieving high load factors.
- Market exit barriers are higher in practice than theoretically described. This leads to continued trends in market behaviour and in some instances to state subsidies of flag carriers.



During the phase of regulation, both domestically and internationally, competition between established carriers in enclosed markets like Europe and the USA was comparatively low. State control mechanisms on competition and operation of airlines kept the number of carriers within reasonable limits. Operating in markets that were characterised by high fare levels on the one side and a constant state capital influx on the other side, especially in Europe, gave airlines little incentives to compete intensively with one another. In pre-deregulation years, European air transport in particular was governed by entry restrictions by means of bilateral control of traffic rights, capacity control through pools, and price control through multilateral negotiation within IATA (see Lyth, 1997, p. 159). Even though IATA was commissioned with the setting of fares on behalf of airlines and individual states respectively, the effective cartel's members still had to consent unanimously. Accordingly, fare levels were set high in order to, virtually, cover the costs of the least efficient carrier. This dearth of price competition resulted in easy profits for the more efficient American carriers and survival for the remaining market players. Consequently, competition was low, and to some extent, "managed" by the regulatory framework.

Market liberalisation thus had a strong impact on competition. With state subsidies decreased or abolished, an increasing number of flag carriers fully or partly privatised, and with entry barriers lowered, competition acquired a whole new face. Within the boundaries of ASA, airlines were forced to rival one another in the global marketplace. The notion of an airline being a nation's insignia reflecting sovereignty and technical expertise started to fade and soon public demand increased to turn carriers into profitable companies.

Airlines had to obey the new environment. Marketing, in particular advertising and sales promotion, became an increasingly important factor in airlines' daily business, which it had, in fact, previously never been (see Hanlon, 1996, p. 39). The struggle to increasingly satisfy demanding passengers in order to cover high fixed costs became the norm. Price differentiation was made possible and widely used by progressive approval processes. The introduction of new classing structures combined with travel restrictions made pricing strategies less transparent and leveraged rivalry.

Product differentiation, previously hardly contemplated, became a competitive tool. Inflight services were increasingly altered to target specific markets. Frequent flyer programmes as well as waiting lounges and transportation facilities beyond airports were used to attract more passengers and deliver formerly non-integrated services in a complete package.



Competition intensity was furthermore increased by the overcapacities of some carriers. Having a wide range of inventory at their disposal, incumbents could build capacity, which led to a mismatch of seat demand and supply on some routes. However, overcapacities also allowed airlines operating 6<sup>th</sup> freedom traffic (see 2.5.4) to dump seats on the (regional) catchment market, but still fill beyond-flights from their main hubs. This legally questionable behaviour, managed to drive fares down and increase competition in many city pairs (see Steininger, 1999, p. 101).

Airlines will have to be restructured to survive in today's competitive environment where, besides original industry-inherent competition, new entrants and charter carriers, as well as low-cost competitors represent a threat to their economic wellbeing. This is why all international carriers run cost-cutting programmes and productivity enhancement schemes; why they rationalise their fleet structure, outsource business units that are not directly related to the core business, and change the organisational and operational structures.

### **3.2.2 Passenger Air Transport Market Entry Barriers**

Legal and economic entry barriers impede airlines from setting foot in new markets and impose significant constraints on market entry, which is regulated by state authorities in two different ways. On a national, statutory scale, a carrier's market entry is controlled by licensing the commercial air transport operation through government air transport agencies. Historically, the reasons for a national control of airline licences lie in the protection of incumbent carriers (economic considerations) and in safeguarding technical standards (technical considerations). In addition to this national operating licence concession, a concession to operate scheduled services internationally is usually required (see Pompl, 1998, pp. 294-296). International market entry regulation is attained by bi- or multilateral negotiations of landing rights as determined by the ASA (see Schmidt, 1993, p. 33 and see 2.5.3). All of these concessions are mandatory and are associated with sets of technical and operational prerequisites with which an airline has to comply.

For intra-European traffic, legal market entry barriers are no longer in place, provided that the respective national aviation authority has approved operational standards. Economic considerations in licensing air transport services are therefore no longer applicable. For traffic beyond intra-European routes, ASA can act as a constraint for new entrants as well as incumbents (see 2.5.3).



Market entry into the domestic USA market is widely liberalised for US carriers, with the Federal Aviation Agency (FAA) being in charge of the licensing process. Constraints regarding international market development for US-based carriers also derive from ASA with third countries.

### **3.2.2.1 Structural and Market-inherent Entry Barriers**

One can generally categorise economic barriers to entry into structural and market inherent barriers on the one side and strategic barriers on the other, as developed by existing market players to fight potential competition (see Piepelow, 1997, p. 88).

Structural and market-inherent barriers consist of the following:

- Product differentiation and branding
- Contestable markets
- Cost advantages
- Economies of size

Product differentiation does not represent a continuous barrier for market entry. Airlines can potentially differentiate their product in a way that allows them to successfully participate in markets once they comply with certain operational standards. Airline product features are usually commodities such as standardised inflight features (seats, food) or passenger handling facilities, which leave room for individualised feature design. The same applies to branding. While incumbents rely on their brand status, especially in the high yield business sector, markets entrants can also successfully establish new brands in the market niche they serve (see 3.2.3 for new entrants). However, the setting up of FFPs, the possibility of offering discounts to the travel trade, corporate clients and individuals, as well as interline-agreements with other carriers, can pose market entry barriers. Especially FFPs have become strong marketing and CRM (Customer Relationship Management) tools in global aviation. Airlines, in particular those serving business segments that are not able to offer passenger and corporate loyalty programmes, will possibly face obstacles to successfully entering markets successfully (see Wells, 1993, p. 196). Small carriers, lacking sufficient networks and operating in highly competitive markets, can be affected by the benefit structure of incumbents' FFPs, which thereby become a serious threat to successful market entry (see discussion on market entry implications of FFPs in Hanlon, 1996, pp. 49-51 and the section on FFP 3.4.3.1).

The contestable market theory, with specific reference to deregulation, was conceptually evaluated in chapter 2. With regards to market entry barriers, a contestable market exists if it is possible to enter a market, and if the provision of a specific offer does not cause any sunk costs in the case of a market exit (see Beyhoff, 1995, pp. 70-71). The air transportation market can be generally argued to be a contestable market as sunk costs are relatively low. The largest investment that an airline has to make is the acquisition of a single or fleet of aircraft. Purchasing or leasing aircraft results in costs that are by no means inescapably sunk. As there is a well-developed market for used aircraft, inventory can potentially be disposed of and re-deployed elsewhere.

Finance does, however, pose an entry barrier. While the equipment itself is not affected by sunk costs, financing inventory is an entry barrier which also affects the financial structure of an airline. The huge capital requirements needed to establish an airline with a network of destinations limits the pool of likely entrants. Despite the sunk costs being low on the inventory side, which limits the investment risk, volatile capital markets are not in favour of the low-margin air transport sector, thus making fund raising difficult.

For some of the above-mentioned product differentiation tools, however, sunk costs do exist. Individually designed FFPs, CRSs and distribution systems or networks, as well as costs for marketing campaigns can be considered sunk costs. Capital spent on IT solutions and advertising cannot be recouped if the airline decides to, or is forced to withdraw from the industry; those costs are then inescapably sunk. This is why at least three compelling reasons reject the application of the contestable market theory to airline competition as a means of lowering market entry barriers.

- Slot allocation: Slots can be considered main, but intangible, airline assets. Their financial value is difficult to judge, although they determine the route-related success of an operation. Especially in highly condensed markets, slot allocation poses a serious threat to airlines' operations. Slots in Europe are allocated at co-ordination conferences, but carriers with a more mature market presence are given priority in slot allotments. Economically interesting slots have usually already been taken by incumbents (see Piepelow, 1997, p. 89).
- Size effects: The airline industry has certain elements of economies of scale. There are particular advantages to size, but the benefits of being large are not derived from conventional economies of scale, but from opportunities to obtain economies of scope. The effects of scope apply particularly in marketing, and specifically with regard to the



benefits of widespread image campaigns. The marketing advantages of larger airlines also surface with regard to CRSs, FFPs, commission overrides and corporate discounts as well as fare agreements, as these aspects require extensive networks to be most effective. Agency loyalty programmes, especially, are more beneficial for travel agents when they promote a carrier that already has a dominant position in the market (see Steininger, 1999, pp. 213-216 and United States General Accounting Office, International Aviation, 1998, pp. 16-17).

- **Route Density:** Most important are the opportunities large carriers have to reap the benefits of route density by configuring their networks in a hub and spoke pattern (see Hanlon, 1996, pp. 39-40). Hub and spoke configurations not only offer large carriers financial benefits, but predominantly organisational advantages (some of the mentioned terms and associations are described in 3.3.2).

### 3.2.2.2 Strategic Entry Barriers

In describing strategic entry barriers, an understanding of the three basic dimensions of market entry barriers is helpful (see Piepelow, 1997, p. 89). These are:

- Decrease of market entry incentives
- Preventive increase in structural entry barriers
- Increase in fear of possible retaliation

The announcement of predatory pricing behaviour is probably the most common practice in reducing market entry incentives for new market players (see Porter, 1980, p. 14). In such cases, an incumbent will announce that, in the event of a new market entry, it would react aggressively in its pricing strategy (see also Mohr and Rodermann, 1995, p. 58). However, there are at least two risks associated with this practice. Incumbents could damage their own financial performance if aggressive pricing were to materialise. Secondly, the mere announcement does not necessarily represent a lasting remedy against new market entrants. These risks, combined with regulatory aspects condemning this type of competitive practice, result in such a strategy being burdened with major disadvantages (see Piepelow, 1997, pp. 89-90).

An increase in structural entry barriers usually consists of restricting access to, or increasing prices for input factors, including marketing channels. By artificially raising a rival's cost to entering a market, the incumbent could successfully control potential rivalry. Possible ways of doing so are vertical integration, exclusive contracts, and pre-emptive rights. As far as

competition at established hubs is concerned, incumbents usually control the most attractive parts of the airport infrastructure through exclusive user rights and long leases, making it difficult for a prospective competitor to gain a foothold. Such actions are, however, strictly monitored by the competition authorities in both the USA and the EU.

Established carriers can incite fear of retaliation by, e.g., deliberately entering markets that are served by new entrants. Competition is thus spread from direct competition routes to new markets. A potential entrant's expectation regarding the reaction of existing competitors might deter entry. Certain conditions, such as a history of vigorous retaliation against entrants, a well-filled war chest, widely known commitment to the industry and an industry structure which limits the ability of the industry to absorb a new firm, favour retaliation strategies by individual players (see Porter, 1980, p. 14).

### **3.2.3 New Entrants as a Novel Factor in Air Transport Competition**

The increasing number of new entrants poses a considerable threat to established carriers. New entrants increase overall capacity and they can lead, especially in the case of unconventional low-cost carriers, to substantial changes in the market structure. The following sections analyse some of the forms of carriers entering the established passenger air transport market and thus challenging existing market players.

#### **3.2.3.1 Low-Cost Operators in the USA**

At the start of deregulation in the USA, the domestic market saw a large number of new carriers serving interstate markets. These operators intended to find niches from which to compete with incumbents - the well-established carriers. In the first six years after domestic deregulation, the number of carriers operating domestically rose from 36 to 123 (see Andrey, 1992, p. 325). Some new entrants chose the premium market as their terrain, focusing on business travel and direct connections between main corporate centres. However, the majority of new carriers established themselves as "light carriers", operating on a low-cost basis and offering inexpensive fares. The operational cost advantage of the light carriers was up to 50% of that of the major carriers in the market, as they offered a "low-cost, low-frill" service (see Steininger, 1999, p. 84 and figure p. 85). This cost advantage was passed on to the passenger so that in the same period mean domestic fares dropped by 34% (see Dresner et al., 1996, p. 309).



An often-cited example of a successful new low-cost entrant in the US domestic market is Southwest Airlines.<sup>22</sup> Southwest has developed a new philosophy towards business operation. The overall aim is to cut unit costs consistently whilst keeping the highest standards of service, but with a “low-frills” appeal. The following summarises a few aspects of the carrier’s performance as a niche player in the US market. These factors can be considered symptomatic of other start-up, low-cost carriers:

#### *Operational Aspects*

- Use only one type of aircraft, the Boeing 737 series. Advantages lie in reduced training requirements for pilots and cabin crew. All pilots are able to fly, cabin crew are able to serve, maintenance employees are able to work on, and provisioning staff are qualified to stock every aircraft in Southwest’s fleet (see Freiberg, 1996, p. 55). Further advantages of the undiversified choice of equipment are more efficient spare warehousing and the possibility to negotiate better arrangements with the mainframe and engine manufacturers. In addition, maintenance costs can be minimised by ensuring that MRO (maintenance, repair, overhaul) providers are required to fulfil consistent, predictable airline demands.
- Use of secondary airports and airports close to business districts of main centres on a point-to-point basis with frequent service (see Dresner et al. 1996, p. 311).
- Ground times for aircraft are cut to a minimum. Turnaround times of about 20 minutes allow for up to 3 hours extended daily aircraft usage, as opposed to hub and spoke carriers (see Walker, *The King of Low-Cost*, 1999, p. 38). Aircraft utilisation lies at approximately 11 hours per day (see Doganis, 2001, p. 134).
- Ground operation staff and aircraft staff have the flexibility to step outside previously defined job categories to get an aircraft off the ground as quickly as possible (see Freiberg, 1996, pp. 57-60).

#### *Commercial Aspects*

- The short-haul dominance of Southwest Airline is evident from a consistent market share of at least 60% on almost every non-stop city-pair market it serves (see Freiberg, 1996, p. 6). In most cases this is due to the type of connection and Southwest's competitive fare structure (for a discussion of Southwest’s trip strategy, also see Economic Strategy Institute, 2000, pp. 17-21).

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<sup>22</sup> Southwest Airlines operates out of Dallas/Texas with currently a total fleet of 358 aircraft.

- Despite a loss during one quarter in 2001, Southwest has always been profitable ever since its founding in the 1970s; an anomaly on the US air transport scene.

#### *Organisational and Governmental Aspects*

- Lean hierarchical structures focusing on fast decision making and informal ways of communication (see Freiberg, 1996, p. 76).
- Southwest Airlines has a strong tradition of profit-sharing by employees by offering their staff stock ownership. The airline has thus established a high ratio of employee commitment that, in turn, has lead to one of the lowest staff fluctuation rates in the industry.
- Execution of internal marketing strategies by which frontline, contact employees are treated as internal customers (see Czaplewski et al., 2001).
- Due to the overall business success and financial stability of the firm, the company has never been forced to launch furlough action, which increases perceived job security and loyalty.
- Competitive wages and high productivity.

#### *Passenger Service/Inflight Service Aspects*

- Initial focus on interstate, short-haul traffic.
- No interlining (see below for types of collaboration).
- Single class service, no pre-assignment in seat selection.
- High seating density through reduced seat pitch.
- No hot meals on board, only peanuts and “fast snacks” on their newly introduced long-haul flights (more than 1000 miles) and generally no onboard entertainment.

#### *Marketing, Sales Aspects*

- No use of established, globally operating CRSs and very high ratio of direct sales through call centres and their own Internet site. Revenue is thus taken up-front and not via settlement plans.
- Ticketless travel.
- Offering significantly lower fares and thus stimulating traffic in newly entered markets<sup>23</sup> (see Walker, *The King of Low-Cost*, 1999, p. 42).

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<sup>23</sup> During a 1991 to 1994 survey period the Southwest's entry in a market resulted in an average fare decline of 48% and a traffic increase of 200% (see Dresner et al., 1996, p. 309).



Despite initial successes by some low-cost carriers, deregulation promoted a high rate of concentration in the domestic US market. Since supply drastically exceeded demand, overcapacities and fierce price competition forced a number of carriers out of the market (for an overview of market entries and exits resulting from deregulation, see Williams, 1993, pp. 14-16). The market consolidated almost naturally and is currently dominated by some mega-carriers, including the low-cost giant Southwest, and regionally established smaller airlines. Start-up firms, however, still operate, but in many cases their task is limited to feeding traffic into the major's hubs.

To intentionally counteract these start-up carriers and maintain their passenger base, incumbents traditionally used a variety of strategies. As they could often not lower their cost base to equal light carriers' expense structures, they had to use a different mix of manoeuvres to remain competitive and profitable. Amongst these were: mergers and alliances, codesharing, hub and spoke systems, new fare structures, incentive schemes for travel agencies, CRSs, FFPs, and making use of restricted infrastructure like airport slots and gates. In addition, incumbents offered prohibitively low fares to fight new entrants in selected markets. Supported by the post-deregulation failure of the competition authorities in the US, the first wave of new entrants could be successfully defeated.

After the Gulf War ignited a global air transportation crisis, low-cost carriers were revitalised, spurred by Southwest's continuous success. Southwest, however, managed to dominate markets by cutting average fares and consequently stimulating more traffic. Using the Oakland-Burbank route, the "California Corridor", as an example, Southwest's entry resulted in a 55% fare drop and a six-fold increase in passenger traffic (see Dresner et al., 1996, p. 309). Some incumbents did diversify their operations and incorporated new low-cost subsidiaries under an umbrella brand. Low-fare divisions established by major carriers in the USA are, for example, United Shuttle (United Airlines) and Delta Express (Delta Airlines) (see Walker, *The King of Low-Cost*, 1999, p. 42). Additionally, individual "Southwest clones" entered the market niche and offered a similar product mix. The year 2001 with its drastic decrease in passenger numbers, especially in the USA, again proved the success of the "model" low-cost carrier Southwest. Southwest posted a profit for the fourth quarter of 2001, after a slight loss in the third quarter, unlike all other passenger airlines in the USA. Southwest's immunity to this extreme situation in aviation somehow underscores the success of the low-cost business model.



### 3.2.3.2 Low-Cost Operators in Europe

There is a justifiable threat to European incumbent carriers by low-cost operators, which is a much more recent and revolutionary phenomenon. With deregulation widening the geographical market base for air transport operators, intra-European traffic became attractive for niche players. In an environment of markets dominated by flag carriers, new entrants can offer diversified services on previously un- or under-served routes at competitive fares. Smaller, formerly regional carriers, and start-up airlines now expand their market presence and, in most instances, offer competitive fare levels on an increasing number of connections (see Doganis, 2001, p. 135).

European light carriers were once regarded as not receiving sufficient passenger acceptance. The notion that air travel in Europe is connected to a perception of higher social status presumably supports a certain resistance regarding the feasibility of light carriers. Southwest Airlines in the USA faced similar problems in the late 1970s. However, management identified these doubts and allayed them by educating passengers, offering a very competitively priced and reliable product and operating safe equipment (see Walker, *The King of Low-Cost*, 1999, p. 42).

However, a simple copy of the American, low-cost business model in Europe is not feasible. European travel habits and thus the composition of passengers are somewhat different to that of the USA. The very price sensitive “visiting-family-and-friends” traffic (VFR) does not hold equal passenger potential in Europe as in geographically large countries like the USA or Canada. VFR travel is usually limited to domestic travel within countries and, consequently, has not had a strong impact on overall European air travel figures. This limited significance of VFR air travel is mainly due to relatively small individual country sizes and the well-developed infrastructure of alternative means of transport. New entrants in Europe need to consider this travel pattern and, accordingly, must also cater for other types of travel, such as business travel, traditional tourism air travel and ad-hoc, low lead-time and low involvement air travel.

Business travel within the EU and its neighbouring countries has mainly been provided by flag carriers operating between the main business centres. But with the European Union promoting peripheral areas of the integration zone, services to remote regions are also required. What has been described above in the context of travel stimulation in the USA, also applies to Europe. With attractive tourism destinations linked by competitive air transport



offers, and the provision of easy access to geographically de-centralised business areas, travel to these market segments could be affected.

Another aspect promoting low-cost operation is the European Airport structure. Low-cost operators already make use of direct services between secondary airports.<sup>24</sup> Secondary airports are usually remotely situated, but offer passenger benefits such as shorter distances within the airport, making late check-ins possible, and offering cheaper parking facilities and more cost-effective service amenities. From an airline perspective, smaller, secondary airports are less sensitive to congested air spaces and allow for quicker turn-around times. Airport landing and handling fees and charges are usually inexpensive, and terminal capacity at competitive rates is more widely available, thus leveraging cost savings. In addition, European category 1 airports<sup>25</sup> are overcrowded and thus represent little physical and cost-effective growth potential for start-ups. Since “grandfather rights” exist in slot allocation<sup>26</sup>, most passenger-winning slots have already been taken by incumbents. Irish-based low fare airline Ryanair, for example, links London out of Stansted with Hahn Airport about 80 km west of Frankfurt and made it its second continental-European hub. From a competitive strategy perspective it is, in any case, not advisable to attack an incumbent at its hub. The costs of providing competitive service levels at a hub are substantial. Winning business from an established carrier, provided that the slot allocation allows this, requires considerable financial outlays (see Wells, 1993, p. 196). Thus, the choice of a secondary airport can successfully circumvent strategic and market inherent entry barriers.

Carriers such as Ryanair, Buzz, Easyjet or Germania offer their services either in direct competition to incumbents via category 1 airports on city pair markets, or by using the above-described secondary airports. They usually market their products aggressively, also for one-way services, which has repeatedly preoccupied competition authorities.<sup>27</sup> Their ticket distribution by means of call centres and through the Internet commonly circumvents the classic travel trade, thus saving on commission payments. It is estimated that a carrier like

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<sup>24</sup> Some attractive secondary European airports are: London/Stansted, Roma/Ciampino, Frankfurt/Hahn, Düsseldorf/Mönchengladbach, Milan/Bergamo.

<sup>25</sup> Category 1 airports, are the main gateways into countries and in most instances hubs of flag carriers or other important operators. Examples are London Heathrow, Frankfurt Rhein-Main, Paris Charles de Gaulle, and Amsterdam Schiphol.

<sup>26</sup> These historic priorities state that slots are to be given to carriers which possessed them during the previous equivalent timetable period (see below for a more detailed discussion of slot allocation and grandfather rights).

<sup>27</sup> Especially the Lufthansa – Ryanair legal struggle in regard to deceptive advertising has been in the public eye since late 2001.



Easyjet has sales costs that are some 60% lower than those of a conventional carrier (see Doganis, 2001, p. 146).

European incumbents try to fight market entry of new, low-cost carriers by means of various measures. To increase market entry barriers, major carriers make use of predatory behaviour. This includes predatory pricing on routes threatened by new entrants, and by setting prices well below the cost of operating the service. Another form of predatory behaviour is to make use of the previously described “increasing rivals’ costs concept”. Incumbents accordingly price infrastructure use or services in such a way that it becomes unaffordable for new entrants. Input factors in this regard would include, for example, the usage of ground services and CRSs. This anti-competitive behaviour is certainly illegal in the European Union, but slow reaction processes by authorities and the risk of plaintiffs running up high legal costs, mean that the practice is still common.

Despite the drastic reactions of incumbent carriers, the low-cost, start-up airline scene in Europe is growing. Economically less hard hit by the events of September 2001, also through actively marketing their services in the weeks after September 11<sup>th</sup>, 2001, low-cost carriers are developing into a serious challenge for incumbent European airlines.

### **3.2.3.3 Non-Scheduled Traffic**

Low-cost operators, commuter carriers and other scheduled start-up airlines only seriously started entering the European airline scene in the late 1980s. Before their appearance, however, other modes of inexpensive air transportation were provided by non-scheduled or charter carriers.

In the years prior to full European deregulation, charter operators did cater for at least some of the market segments which are at present served by low-cost carriers. Their focus was mainly on the tourism sector, providing air transport to Mediterranean holiday destinations. Traditionally, charter airline seats were sold by tour operators and travel companies as part of holiday packages, which also included accommodation. With the arrival of low-cost start-up carriers, charter airlines, however, came under pressure to defend their market positions both against other new entrants and against more market-orientated incumbent scheduled airlines. During the 1990s European charter carriers thus started to sell spare capacity on a seat-only basis without accommodation, thereby filling their seats whilst moving towards direct competition with scheduled carriers.



The reason for charter carriers developing into significant market players, posing a threat to conventional as well as low-cost carriers, pertains to their regulatory status, their cost structure and the way their capacity is distributed. Non-scheduled carriers operate far below the cost levels of their scheduled counterparts. It was estimated that charter operators run at unit costs 50-65% lower than those of scheduled carriers. Fares for seat-only sales can thus be offered 30 to 40% below the lowest scheduled fares (see Doganis, 2001, p. 158). The explanations for their more cost-effective operation are manifold:

- One travelling class configuration allows for more seats in larger aircraft, thus lowering unit costs per passengers or cost per offered seat kilometre.<sup>28</sup>
- High daily aircraft utilisation.
- Charter passengers are less sensitive to marketing tools like FFPs, hub and spoke networks, or codeshare operations. In the past, this made the establishment of these tools less crucial and accounts for the marketing costs of charter operations being significantly lower than those of scheduled carriers.
- Seats are usually sold in contingents to tour operators or agencies, who, in turn, spurred by prospects of commission, internalise the carriers' marketing expenses. Charter carriers thus tend to have higher load factors due to vertical integration with tour operators and travel agency groups. In addition, after the third European Liberalisation Package, charter operators were allowed to sell their tickets directly to customers.
- Inflight service like catering and entertainment is much leaner and therefore cheaper. Charter airlines' cabin crews tend to be less expensive.
- The productivity of the workforce is higher, also due to lower wage levels and reduced trade union influence.
- Charter operations are not part of a bilateral ASA. Being omitted from any regulation in the Chicago Convention, charter traffic previously operated in a relatively regulation-free environment. In 1956, all regulations on concessions by the destination country of a charter flight were abolished by the European Civil Aviation Conference. This is why charter carriers can decide on their market access, fares and capacity in a fairly flexible manner. Routes can be served and the service easily discontinued seasonally, leading to opportunistic servicing of markets.

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<sup>28</sup> However, in the 1990s charter carriers also started introducing prime travelling classes to offer more convenient travel to less price sensitive holiday travellers and the more price sensitive business traveller.



The above-mentioned factors lead to a threat potential by charter carriers aimed more at low-cost operators than scheduled traffic. Given the fact that charter operators run at considerably lower indirect cost levels than scheduled operators, the notion that they somehow are an emulation of the US low-cost operators is justifiable. Some charter carriers, attracted by the inefficiencies of incumbents, have launched scheduled services and have entered mainstream business markets with the major carriers (for examples of charter carriers' migrations into scheduled services, see European Commission, 1997, p. 44). Continued success and significant market share gains are, however, not observable. This is linked to hurdles on the marketing side - lack of brand status - and in operations - inadequate equipment. Simultaneously, another hurdle may be that charter frequencies and departure and/or arrival times might not meet the need of the regular air traveller.

A threat potential - also to scheduled carriers - becomes evident on long-haul routes that non-scheduled carriers increasingly serve. With travel patterns changing, and an increasing number of tourists travelling to distant holiday destinations, charter carriers offer seasonally fluctuating services, which in some cases manage to grab market share from scheduled competitors (see European Commission, 1997, pp. 45-46).

### **3.2.4 Threat Through Substitutive Products or Services**

The possible growth of an industry can be impeded by substitute products or services. Air travel providers offer a transportation service that may be substituted by terrestrial conveyance. Air transportation, as a provision for personal communication, can obviously be substituted by telecommunication. The following describes these aspects.

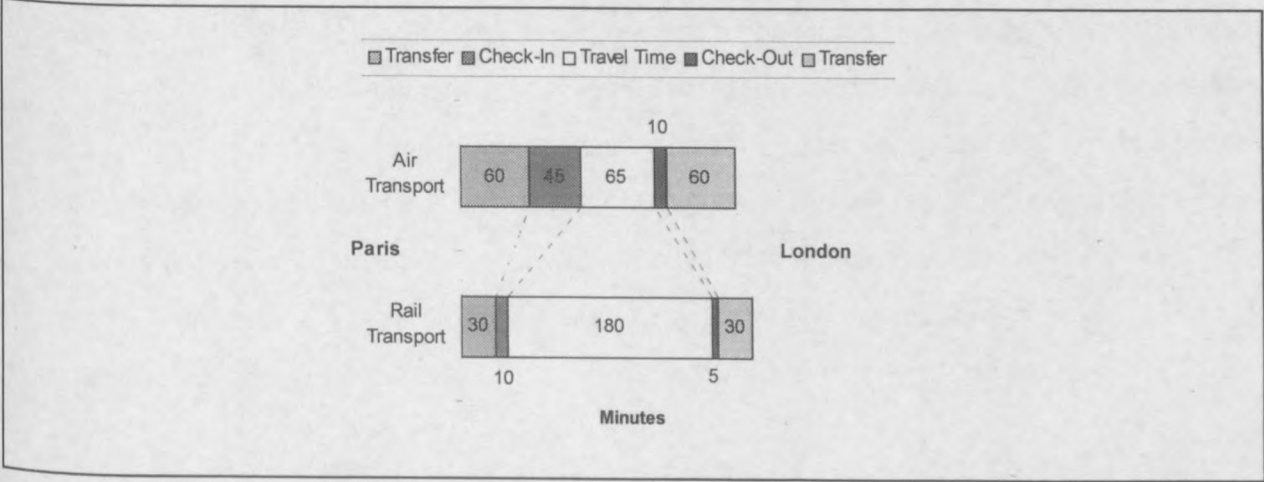
#### **3.2.4.1 Substitutive Traffic Carriers - Terrestrial Transportation**

The most significant traffic carrier is road transport. Road transport offers, given sufficient road density and linked infrastructure, flexibility and the physical ability to offer door-to-door travel service and efficient travel time on distances below 500 km (see Opitz, 1994, p. 118). Because of its limited transportation speed and high direct and indirect costs, it can, however, not fully be considered a substitute to air travel. In the passenger's choice of transportation modes, attributes like tariffs, speed of travel, safety, on-time performance and flexibility play an important role. Of these elements, speed seems to be the most crucial decisive factor, which is certainly a disadvantage of road transport on longer distances (see Piepelow, 1997, p. 91).



A more realistic threat to air travel is rail transport. The railway is a segregated form of travel, which gives it a potential for high speeds. High-speed train systems, especially in Europe and Asia, link large cities that lie relatively close to one another and can be served by trains in line networks. High-speed train networks in the EU comprised about 2800 km in 1999, while an extension to 4384 km is expected by the year 2006 (see European Commission, Directorate-General for Energy and Transport, 2000, p. 27). Usually train stations are situated in, or very close to the central business districts. Check in and check out are quick and easy, and convenient access to other urban mass transportation systems is usually provided. Railroads linked to other transportation means make them a fast and convenient travel service provider. The following figure comparatively demonstrates the total travel time of rail and air transport between the city centres of Paris and London.

Figure 3.1: Travel Time London-Paris for Air and Rail Transport



Source: Opitz, 1994, p. 123

Total travel times are almost equal: air transport totals 240 minutes and rail transport requires 255 minutes for the approximately 500 km trip. For this distance, a choice of either rail or air transport is thus primarily determined by fares and individual preferences.

The effects of rail transport on air travel can be significant for certain markets. High-speed train links, e.g. between the cities of Paris and Marseilles in France, are expected to decrease demand for flights on this route by about 25%. The 800 km distance can be covered in about 3 hours. Air France, however, is facing the competition on this leg and does not intend to abandon its second biggest domestic route Paris-Marseilles. In 2000, Air France dropped its Paris-Brussels route due to stiff competition by the French high-speed TGV train systems, but closed a collaborative agreement with the national railway operator SNCF (see N/A, Air France Expects Big Competition from TGV Rail Link, 2001).

Rail transport in highly populated regions such as Europe is being made even more attractive by linking the high-speed train systems of individual countries. European policies promote a common network of high-speed train connections. On many inter-city routes in Europe, competitive air transport's advantages, such as speed and travel time, will thus erode in favour of trains. However, European integration of high-speed rail linkages in an integration area requires authorities to reach an agreement on technical and operational standards and general availability, to make rail travel a truly international mode of transport (for the future of the European high-speed train system, see Opitz, 1994, pp. 119-121).

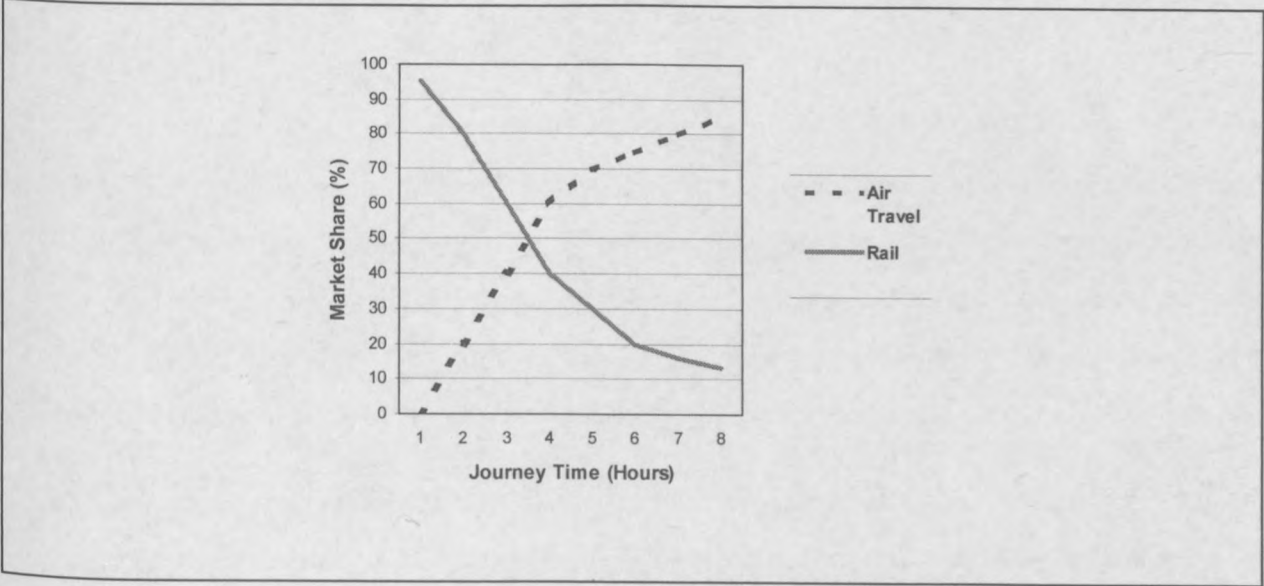
Other than the mere travel time, train systems provide high standards of service, often targeted at the economically more interesting business traveller. Comfort standards onboard trains are similar to those of business air travel, with a variety of catering facilities, entertainment and dedicated individual workspaces. Better working conditions and a much longer effectively useable work time again seem to be in favour of rail travel.<sup>29</sup> Rail transport operators increasingly make use of other marketing and CRM tools - well known from the airline industry. Internet-based sales, loyalty schemes and discount allocation for repeated usage attract high yield travel as well as stimulating travel. The combination of factors such as travel time, service and the initiation of traveller loyalty schemes make existing train systems a viable competitor to air transport on distances up to 500 - 600 km, or up to 4 hours travel time. The figure below supports this view by depicting markets shares in relation to journey time.

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<sup>29</sup> However, historical figures show that on a European scale, rail transport will be trailing air transport soon. With an average annual change in performance figures (passenger kilometres, PKM) of 5,5% in the period 1990-1998 (rail transport 0,7%), air transport will soon pass total rail transport performed passenger kilometres (see European Commission, Directorate-General for Energy and Transport, 2000, p. 81).



Figure 3.2: Market Share Determined by Travel Time of Rail and Air Transport in Europe



Source: Baker and Field, 2001, p. 108

The 3,5 hour mark seems to be the point at which rail and air have an equal market share. Below this, rail transport predominates, and beyond this mark, air transport quickly gains market share.

Airlines need to see the competitive position of rail transport more as an opportunity than a threat. Inter-modality of air transport and rail services provide a set of synergies to avoid the more jammed air spaces and offers environmentally friendlier alternatives to air-based travel (see Diegruber, 1991, p. 213). Including rail transport into the regional market strategy should be an airline business goal, especially in Europe. Prior to this, prerequisites must be fulfilled. The transfer between the two modes must be as seamless as possible and scheduling, reservation, pricing, ticketing, baggage handling and check-in procedures must be integrated. In addition, true infrastructure integration, such as high-speed train stations at airports, must allow physical closeness of the transport systems (see Baker and Field, 2001, pp. 107-108). This could ultimately lead to an enhancement of passenger use, less environmental impact, and would certainly help to decrease air space congestion (see Rondinelli and Berry, 2000, pp. 401-402). Some airlines have complied with the challenge of inter-modality and included rail transport into their marketing strategy by using it as feeder and de-feeder services at their hubs.<sup>30</sup> As railroad infrastructure is increasingly included in airports, seamless travel offers, paired with other marketing tools, such as FFPs or CRSs make rail transport a viable

<sup>30</sup> Air France uses the TGV at Paris Charles de Gaulle, Lufthansa makes use of the ICE in Frankfurt and has basically outsourced its air service to Stuttgart to the rail provider Deutsche Bahn AG, Delta Air Lines has a marketing collaboration with the rail operator SNCF to various destinations in France.

substitute for regional air transport and a complementary travel mode for medium and long haul service.

### 3.2.4.2 Telecommunication as Substitutive Competition

Telecommunication can be considered substitutive competition, but does not form part of the transportation industry. To scrutinise potential non-traffic competition, an examination of different travel motivations is necessary. Tourists, pleasure travellers and VFR passengers mainly use air transportation to change geographic location. The motivational aspect of geographical change for leisure reasons is not likely to be substituted by telecommunication.

Business passengers' main travel purpose is to benefit from effective communication and to overlook and negotiate business-related issues on site. This need can be increasingly satisfied by telecommunication. In this context, one emphasis lies on teleconferencing which holds cost-saving potential with regard to saved out-of-office time and related indirect as well as direct travel expenses. For the USA, the greatest impact of telecommunication on air travel is expected to be in intra-company connections with possibly some 30% of air trips substituted by the year 2010 (see Caves and Gosling, 1999, p. 59). With the deregulation and privatisation of telecommunication service providers, costs of telecommunication fell drastically over the last half-decade, while access to sophisticated hardware and infrastructure, like fibre optics, increased the quality of communication significantly.

Another form of communication is the Internet and its related services, such as e-mail or chatting. E-mail, especially, offers a fast and reliable means of communicating and conveying attachments in various formats. The Internet represents a great source of information and a forum for information exchange, as well as a trading and consultation platform for private and business use. The Internet benefits from the advanced hardware and infrastructure available, thus making it an increasingly widely used means of communication.

The overall effects of telecommunication on air transport have been discussed by various scholars (see Caves and Gosling, 1999, pp. 58-59 and Piepelow, 1997, p. 92). Some argue that the threat to air transport operators by telecommunication is negligible, because telecommunication cannot make up for personal contacts, thus still promoting private meetings. The proliferation of telecommunication and its facilities might even induce the wish to meet the communication counterpart personally. Another aspect affects private travel: if telecommunication reduces professional travel time, this saved time can be used to travel privately more often (see Steininger, 1999, pp. 82-83). More communication might also



simply stimulate more business and thus more communication and travel are needed (see Piepelow, 1997, p. 92). This is a typical argument that has been derived from the globalisation era, since globalisation has been made possible by the provision of communication and transportation facilities alike.

It is difficult to judge whether (tele-)communication is a substitute for business travel. More research needs to be conducted, also in the light of the significance of communication in phases of externally stimulated reluctance to travel, e.g. as in the months after September 2001. It can be stated, however, that communication does influence today's travel patterns.

### **3.2.5 Bargaining Power of Suppliers**

One of the key features of Porter's industry structure model is the bargaining power of suppliers (see Porter, 1980, p. 4 and Porter, 1985, p. 6). Suppliers in the context of air transportation include all providers of additional services, products or infrastructure which an airline requires in order to deliver its air transport service.

Suppliers can establish a specific bargaining power, threatening to increase costs of products and services or decrease quality (see Porter, 1980 p. 27). The bargaining power depends on the degree of competitive concentration in the supplier's industry in relation to the degree of client concentration. Other influencing factors of bargaining power are the competition with substitutive supply products, the specific importance of supply products, or services for the client, costs to switch suppliers and the potential of the client to integrate backwards, or for the supplier to integrate forwards (see Piepelow, 1997, p. 92).

The succeeding sections describe the main categories of air transport industry suppliers and their discrete bargaining power.

#### **3.2.5.1 Air Transport Infrastructure Provision**

The civil air transport system consists of several elements, which were described above. To provide an overview of how market performance influences infrastructure supply factors, the following sections focus on airports, slot allocation and ATC.

##### **3.2.5.1.1 Implications of Airport Facilities Provision**

A full description of the business implications of airports would be extensive, therefore the focus merely is on airports' provision of airline and airline partnership-related services, as

well as on an introduction of business trends in airport operation, which influence the relationship towards carriers.

Airports generally represent coupling points, chronologically - due to varying departure and arrival times - and spatially - due to diverse routings and directions - linking transportation processes. Their main task is thus to handle - arrival, transit and departure - the transportation object - passengers, freight and mail (see Sterzenbach, 1996, p. 109). Airports therefore provide the following infrastructure categories:

- Provision of take-off, landing, taxiing and parking facilities for aircraft - an aeronautical category
- Provision of other installations, buildings, and space directly and indirectly necessary for air transport services (e.g. air traffic and ground safety and security as well as ground service and technical service infrastructure) - an aeronautical category
- Provision of other installations, buildings, and space necessary to meet the demands of the airport's users<sup>31</sup> (e.g. passenger waiting facilities, entertainment, catering, shopping offers, parking and transportation facilities, business space, and information) - a non-aviation category (see also Faulks, 1999, p. 75 and Sulzmaier, 2001, pp. 1-4).

The following table gives an overview of basic airport functions for various interest groups.

Table 3.1: Airport Functions for Different Interest Groups

CUSTOMER GROUPS	Airlines/Airline Partnerships	Local Passengers	Transfer Passengers	Local Residents/ Airport Employees, Visitors	Local Business	Global Business
FACILITIES AND SERVICES	<ul style="list-style-type: none"><li>• Flight Operations</li><li>• Handling</li><li>• Fuel</li><li>• Air Freight</li><li>• Catering</li><li>• Office Space</li><li>• Seamless Travel Facilitation</li><li>• Provision of physically close Operations</li></ul>	<ul style="list-style-type: none"><li>• Travel Necessities</li><li>• Duty free</li><li>• Foreign Exchange</li><li>• restaurants</li><li>• Parking</li><li>• Taxi, Railway</li><li>• Bus Transport</li></ul>	<ul style="list-style-type: none"><li>• Expedited Connection Facilities</li><li>• Duty free</li><li>• Lounges</li><li>• Restaurants</li><li>• Hotels</li></ul>	<ul style="list-style-type: none"><li>• Supermarkets, Speciality Shops</li><li>• Bank, Post-offices, Telecom</li><li>• Leisure Facilities, Canteens</li></ul>	<ul style="list-style-type: none"><li>• Offices/ Conference Facilities</li><li>• Logistics/ Warehousing, Servicing</li><li>• Franchise Agreements</li></ul>	<ul style="list-style-type: none"><li>• Comprehensive Service Offers</li><li>• E-commerce</li><li>• Value added Logistics</li><li>• Headquarter Locations</li></ul>

Source: Mercer Management, 2000, p. 71 and own supplements

Airports themselves are, consequently, business entities, operating as service providers in airlines' value chains on the one hand, and also individual players among competitors in their own airport industrial sphere, on the other.

<sup>31</sup> Airport users are commonly categorised into: airlines, passengers, visitors (general visitors as well as drop-off and pick-up visitors, meeting visitors), residents, concessionaires, and employees.



In classical airport business models, airports generated sustainable business success by handling more air traffic in high growth markets. Apparently, product superiority and high relative market share lead the way to success, while costs could easily be passed on to airport users with little fear of competition. In a more competitive airline and airport environment, resulting from deregulation and privatisation of traffic infrastructure, airports are exposed to augmented competitive pressure and have to re-focus their strategies (see Sulzmaier, 2001, pp. 8-11). Profit distribution patterns have become different and a complex array of new market opportunities is emerging in conjunction with many types of competitors (see Mercer Management, 2000, p. 69). Skills and business designs that were once highly rewarded, such as ground handling, engineering and architecture, are losing their economic relevance, therefore value generation has to migrate to new profit zones. The latter are seen to lie more and more in non-aviation areas, such as the above-mentioned installations for airport users, but also in businesses like facility management, consulting, capital and finance and IT & communications (see Accenture, 2002).

Structural changes in the aeronautical and aviation category pose challenges to airport development. An airport, having tailored its business to market circumstances that no longer exist, might find itself with an oversized and under-served infrastructure. Airlines withdrawing their services, such as international links or hub systems, from airports leave them with an infrastructure that does not apply to operational needs thereafter. Baggage handling facilities designed for international traffic do not necessarily meet the needs of low-cost carriers operating domestic or regional services. Similar problems occur when planning positioned the airport for local and regional passengers, but airlines and airline partnerships decide to commence international hub operations. In this competitive environment, airports must proactively design new business opportunities and not merely try to enhance existing components. The classical set of offers therefore has to be altered (see also Accenture, 2002).

Air space congestion is one of the prime aviation problems in dense markets like Europe and certain parts of the USA and Asia. The current situation is expected to worsen. According to IATA's growth statistics, all top 20 airports within Europe will be congested by the year 2010 if traffic growth continues at forecast levels. In this region, just three new airport building programmes were in process in 2000, namely Athens, Berlin and Lisbon (see Baker, *Return to Growth*, 2000, p. 57).

One way to redress congestion is via secondary airports. It is already a fact that Europe's secondary airports' traffic have grown more rapidly than the major hubs in the region. This is

partly the result of low-cost operators servicing smaller airports (e.g. London Stansted, home to Ryanair and BA's low-cost operation Go, and Hahn, near Frankfurt, one of the continental European bases of Ryanair), or secondary airports acting as express substitutes for the bigger airports in the neighbourhood.

There are further concerns regarding the funding of required airport extensions (see Caves and Gosling, 1999, pp. 20-21). Market flotation of airport companies seems to be a remedy, which usually goes hand-in-hand with privatisation (see Bennet, 1999, p. 46). Since airports' quasi-monopolistic status and high profit margins make them the target of financial investors' interest, the capital side of airport expansion should be resolved in the coming years. In the USA, where federal funds are available for expansion, airports, however, tend to rely more on tax-efficient bond issues and partnerships, including airline funding terminals. Similar developments can be observed in Europe. In Munich, Lufthansa's secondary hub, the airline has established a joint venture with the airport company to finance, build and operate a new terminal (see Baker, *Return to Growth*, 2000, p. 58).

A new phenomenon has emerged in airport operation - global groupings. Companies like the British Airport Authority (BAA), the Amsterdam-based Schiphol Group or Frankfurt's Fraport (the former FAG) are just examples of airport operators expanding their influence worldwide. The Italian Aeroporti di Roma (ADP) emerged with the winning bid in South Africa's airport privatisation (see Bennet, 1999, p. 47, and see Caves and Gosling, 1999, pp. 32-33). Concentration of airport operators is, however, to be expected within the coming years, leveraging market power concerns (see Accenture, 2002, p. 11).

Some major international hub airports are in favourable positions with incumbents being the dominant user of their infrastructure. Many carriers are associated with one specific airport. Lufthansa has been based in Frankfurt since starting operation in the 1950s, British Airways has always predominantly operated out of London Heathrow, South African Airways' base is Johannesburg International Airport and Delta Air Lines operates out of Atlanta. These bases are certainly economically motivated, with business centres as the main passenger catchment areas in the vicinity. However, long-standing commitment to one specific site also gave rise to investments in infrastructure and relationships with local value providers that represent sunk costs and thus high exit barriers. Consequently, and despite threatening announcements aimed at airport operators due to capacity constraints, airlines like Lufthansa will not give up their facilities in Frankfurt, neither will BA abandon its hub operations at Heathrow (also see Baker, *Return to Growth*, 2000, pp. 56-57).



This gives the airports a certain control in the form of “customer ownership” and justifies their power as an air transport service and infrastructure provider (see Mercer Management, 2000, pp. 72-73). In a most obvious form, customer ownership is represented by airports’ fees and charges. While airport infrastructure deregulation demands transparent, fair and cost-related fees and charges, these expenses are significant to airlines and other user groups. They vary between airports<sup>32</sup> and can pose a prohibitive entry barrier. Customer ownership is represented by airport approaches towards airline alliance. To offer seamless passengers travel, airline partnerships seek to position airport infrastructures close to each other, in order to make passenger handling and transfers as easy as possible. In some instances, these plans materialise e.g. in Frankfurt, where Star Alliance is grouping its partners in Terminal 1 (see Baker, Slow Shuffle, 2000 and Pinar, 2000). At other airports, in most instances those with a dominance of a non-member of a multilateral partnership, these plans are sanctioned by airport authorities (see Hill, *Global Challenger*, 1999, p. 54). In these instances, airline alliances struggle to situate their members’ operations close to each other. Similar obstacles are observable at airports that refuse co-operation due to political motives. Preferential treatment of the home carrier or the home alliance is still the practice at government-controlled airports (see Buyck, 2000, p. 52). Other airport authorities tend to be more co-operative. Given the geographical disposition of London Heathrow it is, however, difficult to fulfil the accommodation needs of alliances. With the Star Alliance partner, British Midland, being traditionally based at Terminal 1 and other partners operating out of Terminals 2 or 3, smooth passenger and baggage transfer is not guaranteed.

Where physical airline partnership co-operation is allowed, airline alliances have managed to alter the appearance of airports, while airports, in turn, have an impact on the publicity and the functioning of airline partnerships. The balance of these two forces can thus generally be described as equal. In addition, airlines try to leverage their position by being more and more involved in capital investments at airports and to guarantee sufficient occupancy of equipment, while airports, on the other hand, provide the housing for the infrastructure and the connection to other services.

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<sup>32</sup> Secondary airports are more cost-effective, thus representing an incentive, especially for low-cost operators to use them.

### 3.2.5.1.2 Crucial Effects of Slot Allocation on Infrastructure Supply

The most acute predicament of air transport development is restricted airport capacities, especially in the main business centres around the world. A shortage of infrastructure facilities at airports as far as runways, terminal and apron space as well as intermodal connections to other urban mass transportation providers are concerned, hinders air traffic development and, consequently, represents a significant bargaining chip.

The main bottleneck is shortage of runway slots. As a result of hub and spoke systems, high occupancy rates of infrastructure and capacity shortages, slots are scarce. Technical restrictions are escalated by administrative regulations of runway usage, such as maximum slots per hour or limitations on night operation. It is almost impossible for carriers to obtain new slots, or to change their existing schedule during peak hour traffic. Airline competition development is thus clearly influenced by the lack of slots as an input factor.

Slot allocation processes, introduced by IATA in pre-deregulation times, aggravate the problem. Following these processes, slots in supply shortfall are allocated as follows: Airlines submit slot applications to the schedule co-ordinator of an individual airport approximately six months before the start of each travel season. The co-ordinator analyses the application and allocates slots according to a priority list. The so-called "grandfather rights" enjoy highest priority. These historic priorities state that slots are to be given to carriers which possessed them during the previous equivalent timetable period. To avoid warehousing of slots, "use or lose" provisions state that an airline loses its slots if it does not use them sufficiently, i.e. 80% of the time. Twice yearly, during IATA's international scheduling conferences, flight schedule co-ordinators hand out preliminary slot allocations to applicants who then have the opportunity to exchange slots with other carriers (see Steininger, 1999, pp. 55-56).

This method offers incumbent carriers the opportunity to maintain entry barriers at congested airports. Being a subsidised flag carrier, incumbents can influence local scheduling committees and can continue to protect their grandfather rights. In the case of monetarised slot trading, which is officially allowed at four USA airports, airlines can afford to cross-subsidise excessively high slot prices at a few pressure points across a large network (see Hanlon, 1996, p. 140, Gleimer, 1996, p. 878-879 and Caves and Gosling, 1999, p. 153.).



The European Union has adopted the above IATA system, but has additionally introduced mechanisms to allow new entrants to gain access to attractive slots at congested and co-ordinated<sup>33</sup> airports (for an interpretation of the EU rules see Gjemulla, 1996, pp. 245-259 and Crans, 1996, pp. 14-16). To facilitate this, slot pools are established to collect newly created, unused (80% of the time), returned slots, or slots lost through the "use or lose rule". Fifty percent of these pooled slots must be given to new entrants if they want them (see Caves and Gosling, 1999, p. 153). New entrants are considered airlines at specific airports that are in possession of less than 3% of all daily slots (see Pompl, 1998, p. 374). In addition, the EU has proposed a maximum limit on frequencies per route and so encourages the use of larger aircraft. Slot swapping is regarded as anti-competitive within the EU, but it is a common practice and some airlines have gained access to highly congested London Heathrow Airport by substitution, and others by black market trading (see Feldman, *Calling the Slots*, 1998, p. 154). Generally, slot swapping has to be approved by an airport's schedule co-ordinator.

Slots in the economically important peak traffic hours are very scarce, but they are a key prerequisite for economic survival. This is why slots and slot allocation processes still represent a major threat to new carriers' successful market entry (see Steininger, 1999, p. 56). A study of slot allocation at London Heathrow and Gatwick proved that despite the EU allocation practice, new entrants were not provided the competitive starting position they required. The majority of allocated slots proved to be unattractive for new entrants, as they were located before 7:00 a.m. and after 9:00 p.m., thus outside the inbound and outbound wave of flight complexes. Some small and medium-sized carriers were excluded from the slot allocation process anyway, as they did not comply with the 3% rule. The recommendations were to pool all, and not just 50%, of returned or withdrawn slots for second and third tier carriers. In addition, it was recommended that requests for slots should be prioritised to allow the most promising new carrier on each of the denser routes the opportunity to build up an effective level of route entry. Furthermore, priority rules should be set at a supranational level and should thus be unambiguous, blind to nationality and tightly drawn (see UK Civil Aviation Authority, 1995 and Caves and Gosling, 1999, p. 154).

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<sup>33</sup> Co-ordinated airports are usually congested airports where, due to a shortage of slots, runway slot allocation systems are in place and supervised by a slot co-ordinator. The co-ordinator is a legal or natural person, appointed by the EU Member States after consultation with airlines, representative organisations and the airport authorities (see Crans, 1996, p. 15).

Certain other schemes are being discussed to establish fairer means of slot allocation. An often-proposed model is to trade slots in secondary markets, or to have them auctioned. Any attempt to expropriate slots from airlines and re-allocate them would, however, encounter serious legal problems. Furthermore, market entry for new entrants would not be simplified by trade in or auctions of slots, since the carrier with the soundest financial background would be granted the best slots. In turn, monetarising slots would render trading much easier and some argue that it would even enable new airlines to enter the market without having existing slots to swap (see Hanlon, 1996, p. 140). Generally, it would be advantageous to trade slots as fungible goods, but the possibility for new entrants to enter these markets also requires serious difficulties to be overcome before operating free buy and sell markets in airport slots is possible. Slots at one airport must be matched by those at another airport. The complexity involved in bidding for combinations of slots renders trading or auctioning rather difficult to conduct (see Hanlon, 1996, p. 141).

One needs to argue whether the problem of slot allocation should be solved with regard to ease of market access for new entrants, or whether it should just be opened to market forces. Other, newly deregulated industries like telecommunication had to face similar obstacles. With new licences for mobile phone standards such as UMTS (Universal Mobile Telecommunications Systems) up for sale in Europe, only those firms with the strongest financial backing managed to win their bids. In this case, national telecommunication authorities did not build in mechanisms to either give preferential treatment to national bidders, or to smaller, new market players. Licence allocation was carried out on a free market principle with the highest bidders claiming the licence as input factor.

The bargaining power or, better, the industry influence associated with the slot allocation process is obvious. With slots being one of the most important airline success factors, an allocation authority or simply an allocation process is given significant power with regard to an airline's business performance. Airports feel that they are in a justifiable position to control slot distribution, since runway slots represent their most crucial assets. However, this notion has not yet been tested by law, and, consequently, the common view that certain airlines have prior rights to slots, remains an assumption.

### **3.2.5.1.3 The Bargaining Power of Air Traffic Control**

A further source of supplier power and a bottleneck in infrastructure are Air Traffic Control (ATC). Europe especially suffers from a chronically overstretched and inefficient ATC.



Reasons for this are to be found in the nationally fragmented ATC systems. According to the Association of European Airlines (AEA), European airspace is a patchwork of 32 national traffic control systems, controlled by 68 centres without a common computer system, communication standards and handling procedures (see Billing, 2000, p. 8). The results are drastic. IATA estimated cumulative European flight delays of 27 million minutes (circa 51 years) resulting in total costs of at least EUR 4 billion for airlines and another EUR 4 billion for passengers in 2000 alone (see IATA, Air Traffic Control Delays, 2000). It is estimated that about 50% of these delays could be attributed to air traffic management (see Billing, 2000, p. 7).

Eurocontrol, a Brussels-based organisation charged with facilitating co-operation between various air traffic control authorities in Europe, has reached its technical limits in an effort to emulate a USA-like system - one computer system and a small number of control centres.<sup>34</sup> This leads to a dearth of co-ordination between national air space control and high operational costs. Consequently, the dense European air space is not used efficiently enough and ATC insufficiencies account for the majority of air transport delays. To achieve a better usage of air space, common technology and shared procedures need to be implemented. The model of national ATC, usually national government-owned, is due to change as a result of pressure from airlines, traffic growth and technology.

In a five-point action plan, IATA has proposed the liberalisation of the provision of air traffic services through commercialisation, privatisation or corporatisation (see Buyck, Blueprint for Europe's ATC?, 2000, p. 53). In this wave, the British National Air Traffic Service (NATS) has been partially sold off to private and public stakeholders and is to be made a private public enterprise. The bill to change the governance arrangements of NATS was passed in November 2000 and the process of turning NATS into a public/private partnership took effect in March 2001.

ATCs generally need an influx of capital for long overdue investments in new technologies to fight growing air traffic and delays and the resulting pressure from airlines. For NATS, capital expenditures to deal with growing traffic over the UK are expected to be about GBP 1 billion over the next 10 years. In the British case, a group of airlines formed a consortium to support the transformation of NATS into a private/public partnership, which makes them stakeholders

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<sup>34</sup> Eurocontrol comprised 26 European member states in 2001.

and shareholders at the same time. However, on a European scale, the privatisation of a single national ATC at this stage is seen to be counter-productive towards a unified European ATC. In a European integration region, it should be an objective to establish one ATC with common standards and technologies (for more on a single air traffic management system in Europe, see Billing, 2000).

There is justification for ATC regarding itself as a bargaining power in its role as part of the air transport supply market. As the main stakeholder guaranteeing safe and orderly air traffic over any air space region, ATC wields enormous power in influencing the air transport market development, especially in dense airspace. Strikes by ATC staff in central European countries repeatedly proved the importance of ATC as an industry player. Although the European ATC system is very scattered, Eurocontrol, which acts as a clearinghouse on behalf of its member States, is a monopolist. On the other hand, ATC-owning governments have so far failed to ensure that traffic management capacity keeps ahead of traffic density. While privatisation could certainly boost the upgrade of ATC facilities, this should be carried out on a co-ordinated, supra-national scale. The establishment of public/private ATC enterprises could lead to monopolisation of air traffic management and thus pose a risk to competition. Competition-harming consequences for airlines, as the users of ATC services, are probably controllable through their own financial involvement. Another control mechanism will also persist - ATC will always have to operate under air traffic laws, thus state or integration region discipline ought to be assured.

### **3.2.5.2 Aircraft Airframe Manufacturers**

The market for civil aircraft is split in two, on both the supply and the demand side. Supply is categorised into producers of aircraft with up to 100 seats and jet-propelled aircraft with more than 100 seats. The former are usually purchased by regional carriers and the supply structure is rather diverse, with about 15 producers present on the global market.

Supply of aircraft with more than 100 seats is only provided by two companies, namely Boeing Commercial Airplane Company of Seattle/USA and Airbus Industrie of Toulouse/France. McDonnell Douglas as the former third largest aircraft manufacturer, merged with Boeing in 1997 and Lockheed ceased production of civil aircraft in the early 1990s. Tupolev and Ilyushin of the former Soviet Union lost market significance after the break-up of the Eastern Block, and "western" equipment being in higher demand. In 2001, market share of the combined Boeing and McDonnell Douglas was estimated to be 49%.



versus 51% of Airbus's share of mainline jet aircraft deliveries (see N/A, Airbus Outsell Boeing in 2001, 2002).

Competition between Airbus and Boeing is very intense. This is partly due to political reasons. Airbus Industrie was founded in 1970 as a consortium of European air and space technology firms, with significant subsidies from national states. The venture's dedicated aim was to build a European aircraft industry in order to secure the survival of the national aviation industries, to keep up with technological developments, world standards and, most important, to fight the dominance of US aeronautical companies (see Pompl, 1998, p. 136). State subsidies are particularly disliked by the US manufacturers, who, via the US government, complained about the practice of state-funding and the company's resulting ability to undercut prices. The European governments in turn argued that start-up grants have only been awarded to support the development of a new, strategically important company and that Boeing receives hidden subsidies in form of military development funds. These funds are, however, also used to develop civil commercial aircraft and thus research and development processes are not market-related (for more on the manufacturers' battle, see Sherman, 1994, pp. 185-190).

This concentrated, duopolistic competition structure unquestionably contains scale effects and other benefits for aircraft manufacturers, but is being discussed as a potential threat to airlines in case of duopolistic co-ordination. For now, competition between manufacturers is intensified by exclusive contracts between carriers and aircraft suppliers. These pacts entitle aircraft manufacturers to secure a certain percentage of the market for the contract period. Airlines, however, also receive a range of benefits by signing up with manufacturers for a longer term. These vary from preferential prices and terms to a flexible disposition in changing types and aircraft configuration, cancellation or extension of orders. As a result of costs and flexibility advantages from exclusive contracts, airlines tend to be loyal to the manufacturer with whom they deal exclusively (see Steininger, 1999, pp. 58-59).

Leasing firms represent a buffer between airlines and manufacturers, ensuring economical survival for some carriers. The industry as a whole would struggle to adapt to market fluctuations without the cushion of leased aircraft. Approximately 2,800 leased passenger aircraft account for about a quarter of the world fleet of western-built commercial jets in service (see N/A, Ranking the World Lessors, 2000, p. 65). Operating lessors are in an oversupply position, since an order peak in the late 1990 is not as yet being reflected by present market performance.

Authors generally do not see manufacturers as a major bargaining power, due to the duoplistic, competitive structure (see e.g., Sterzenbach, 1996, pp. 76-77, Pompl, 1998, pp. 134-138, N/A, Snakes and Ladders, 2001, pp. 16-17). Fierce competition between the main suppliers Boeing and Airbus, and comparatively high equipment volumes on the used aircraft market lead to a limited bargaining power. Additionally, cyclical factors are followed by order cancellations on the airline's side and lead to overcapacities on the manufacturer's side. Thus airlines can pass the market pressure to which they are exposed on to aircraft and engine manufacturers, consequently forcing them to market their products more competitively.

### **3.2.5.3 Other Air Transport Related Services and Products**

Historically, flag carriers did have a profound production depth and a wide value chain. Tasks like ground handling, maintenance, IT, flight training, catering and technical services were once an integrated part of an airline's value chain, or were supplied by state controlled airports. Politically motivated sovereignty considerations and the lack of markets for air transportation-related products and services, forced carriers to vertically integrate and/or develop industries, or to make use of services offered by a limited group of licensed providers. This is one reason why functions that were not a main part of an airline's core business were highly regulated and free market competition was impossible. In many instances, outsourcing of services was also unrealisable as nations - as major shareholders - did not allow for statutorily regulated services to be passed on to private businesses.

With the dawn of airline deregulation, however, new entrants were entitled to offer transportation-related services to airlines and airports. In this context, it was an integral part of the EU's air transport deregulation to open markets for air transport services to free competition. Even though the deregulation directive has built-in transitional periods, or has locally limited the number of service providers to only two, it is expected that increased competition will be beneficial for all parties involved. By January 2001 ground services had to be liberalised at all European Union airports that cater for more than 2 million passengers a year. According to the European Council directive, ground handling comprises the following (see European Union, Council Directive 96/97/EC, 1996, Annexe):

- Ground administration and supervision
- Passenger handling
- Baggage handling
- Freight and mail handling



- Ramp handling
- Aircraft services
- Fuel and oil handling
- Aircraft maintenance
- Flight operations and crew administration
- Surface transport
- Catering services

For airlines, the consequences of deregulated ground handling markets were obvious. Firstly, a loss of sources of income and thus the inability to cross-subsidise other operations through profits could possibly occur. This obviously only applies to those carriers that are unable to maintain their in-house ground-handling companies due to intensifying global competition. For airline-linked incumbents in ground handling,<sup>35</sup> the new market forces represent business opportunities. Secondly, increased competition in this newly created market have given airlines the opportunity to source services from specialised suppliers with global coverage and to use external economies of scale. This, in turn, embodies the potential of cost savings and benefits in service quality. Prices for ground handling services are estimated to fall by about 20% in Europe once all airports are open to market forces for ground-handling services (see Gill, Ramp up, 2000, p. 47). Airlines do, therefore, also vertically dismantle their operations in favour of efficient third party offers.

Concentration is, however, to be expected in the ground-handling scene. With airlines and airports divesting from their traditional divisions, possibilities of consolidation for ground handlers emerge (see Pilling, Getting a Grip, 2001 and Pilling, Empire Building, 2001). The effect with regards to excessive bargaining power from this development cannot be quantified at this point. Nevertheless, an evolution towards markets in favour of a few large handling firms is to be expected.

### 3.2.6 Bargaining Power of Buyers

The sales market in an industry possesses bargaining power if the market is empowered to generally influence the prices and/or the quality of products and services (see Porter, 1980, pp. 24-26). The bargaining power depends on the degree of concentration of buyers (essentially passengers and trade intermediaries) as opposed to the concentration within the

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<sup>35</sup> E.g. Lufthansa's former GlobeGround or Swissair Group's Swissport. Both airlines, however, sold off their ground handling divisions in late 2001.

airline industry; the significance of the market for the suppliers (airlines) and the cost for the market to switch to substitutive products (see Piepelow, 1997, p. 93). A comprehensive description of bargaining power-influencing factors would not be suitable for the purposes of this dissertation, but certain determining issues, particularly focussing the end-user of air transportation, are scrutinised.

### **3.2.6.1 Demand Development and Passenger Segmentation**

The buyer's side of the air transport market is characterised by a profound fragmentation. Every individual client, i.e. passenger, is a buyer and thus, as a single market member, has little bargaining power in respect of an airline. However, grouped in market segments, passengers can leverage their bargaining power in relation to carriers. The present situation is in direct contrast with the long period of strict air transport regulation. In an environment of little competition and much state funding, passenger bargaining power did not pose a significant threat to airlines. This changed with the limited and, in some instances, total abolishment of the regulative framework. Generally, power shifted significantly toward the customer (see e.g. Prahalad and Ramaswamy, 2000).

The heterogeneous group of airline passengers can be segmented, resulting in a portfolio of meaningful consumer groups and thus market segments. Variations within each segment are significantly less than those between them. In order to identify these market segments, a set of relevant characteristics can be used. These include:

- Trip purpose: business, pleasure, VFR, and other personal reasons
- Traveller characteristics: age, sex, occupation, income, and flying experience
- Trip characteristics: length of haul, peak vs. non-peak, day of the week, and season
- Length of stay: return same day, overnight, and vacation (see Wells, 1993, pp. 299-301)

A market segmentation is carried out on the basis of these variables, resulting in estimates of segment size and passenger profiles (for STP - Segmenting, Targeting, Positioning - Marketing, see Shaw, 1987, p. 23 and Kotler and Bliemel, 1995, p. 421-463). Important in evaluating the bargaining power of passenger segments is also the division of markets into geographical market segments. As each O&D (origin-destination) market heralds individual characteristics of passenger composition, competitive situation and fare levels, these issues need to be taken into consideration in assessing the power of distinct passenger groups.



Every segment thus has its specific bargaining power potential towards an airline. With a carrier's commitment to cater for a particular segment or group of segments, it deliberately enters a situation of exposure to the bargaining power of these segments. The decision of an airline to face this bargaining power, is obviously also based on threat/benefit considerations arising from the buyer's market strength in respect of the supplier.

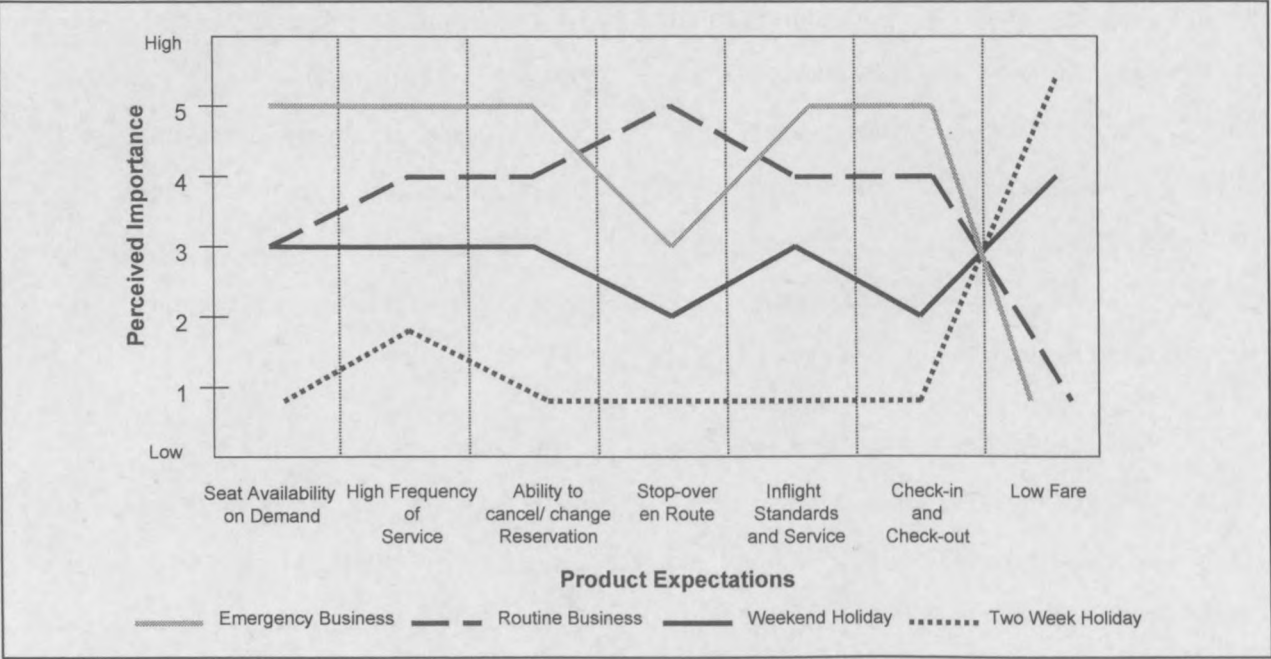
Demographic changes in the population structure as well as macroeconomic and social shifts, result in varying traits, attitudes and expectations regarding the utilisation of an air transport product. The success of airlines hinges upon the knowledge of the changing business and market environment. This calls for a dynamic and continuous process of marketing orientation to suit passengers' preferences in a chosen target market and to deal with the respective bargaining power of a selected segment (for a study on passenger preferences and behaviour, see Kaynak et al., 1994, pp. 241-250).

Of high significance, due to their yield-generating potential and lower sensitivity to fares and seasonal fluctuations, are business travellers. Airlines have long designed their products around the specific needs of this air travel segment. FFPs were initially created to develop loyalty among regular travellers, namely business passengers and were designed to mitigate bargaining (switching) power by binding business passengers to one specific carrier. A further concession towards the specific need of business travel is the fact that carriers plan their trips around business hours, in the so-called waves. Considerations pertaining to prestige when travelling in business or first class are also seen as demands of business travellers and are therefore incorporated into the product design. The bargaining power of this segment is substantial, especially in connection with corporate sales agreements between a carrier and a company.

Private travel is more sensitive to fares, but less sensitive to product feature variations. Seat availability, booking flexibility and frequency are less important for this segment than for business passengers (see Kaynak et al., 1994, pp. 242-250). Airlines, however, can better adjust to capacity fluctuations of private travel, since bookings are made well in advance of the actual flying date (see Diegruber, 1991, p. 115). The bargaining power of the economy segment in particular, emerges once specific economy travellers' needs and perceptions are not met. Among these perceptions are certainly the fare levels of air transport. This bargaining power is particularly experienced by incumbents operating in direct competition with low-cost operators.

The following figure visualises the product demands of the different traveller segments. From these demands a very specific profile of bargaining power in respect of an airline’s product is developed. If an airline cannot fulfil the described product expectations, the passenger will take sanctions and switch carriers.

Figure 3.3: Passenger Product Expectations



Source: Doganis, 1986, p. 210

The above-mentioned air transport product expectations only represent headings of a wide range of passengers' product demands. Each of these headings subsumes fragmented individual bargaining powers generating from personal products expectations (see Köhne, 1997, pp. 25-33). A further description of these product features is given below.

3.2.6.2 Distribution Structure - Travel Trade

The most important indirect sales channel for air transportation products are travel agencies and tour operators. Travel agencies became economically and psychologically important after deregulation, as the intransparent structure of fares and travel rules rendered decision processes in purchasing air transport products difficult. Travel agencies thus developed from being mere ticket sellers to information brokers, who, through sophisticated CRSs, could filter complex information for the customer. Where airlines merely offered the core air transportation product, travel agencies covered the whole travel arrangement value chain, including hotel bookings, rental car reservations, leisure activities and others. This gave travel agencies a stronger position in carriers’ sales processes in post deregulation times.



However, concentration trends and the emergence of new technologies have re-shaped the travel trade industry. Whereas in the past, a highly fragmented market of travel agents served private as well as corporate clients, the market power of clients lead to a competitive threat towards the agency industry which, consequently, resulted in consolidation. Corporate clients increasingly use their bargaining power to decrease transaction costs by reducing the number of travel agencies they deal with. Corporations also more actively monitor their employees' travel costs and negotiate rebates with agencies. Another reason for business clients to put competitive pressure on agencies is the threat to bypass the services of the travel trade and to deal directly with an airline or a group of airlines of their choice.

In tourism, travel agencies face clients' bargaining power due to overcapacities in the supply market. Yet, the influence of leisure and small business travellers is less strong, since the incentives for travel agents servicing these customer groups are diverse. From a marketing and customer loyalty perspective, the agent seeks the lowest prices and the most acceptable routing. The commission system, however, rewards agents on the basis of the total price charged to the client, or the revenue made with a specific airline; hence there is disincentive to seek out the lowest fare (see Wells, 1993, p. 307). With regards to the bargaining power of airline passengers, travel agencies need to find the right balance between the above-mentioned sales incentives, which, in most cases, is easier to achieve through consolidation.

Airlines as suppliers try to decrease their distribution costs by reducing the ticket commissions paid to the larger part of travel agencies. Some preferred agents, however, receive commission overrides, which, combined with CRSs, have much success in causing agencies to shift travellers to favoured transport providers. In addition, commission overrides are tools with which to "buy" loyalty from travel agencies and thus reduce bargaining power in respect of the carrier (for more on commission overrides, see 3.4.3.2). As travel agencies classically have an advantageous sales proposition if an airline offers a better network out of the agency's market, airline partnerships leverage the bargaining position of carriers. Internet-based distribution is one of the major challenges for the brick-and-mortar travel trade. Airlines themselves are increasingly involved in the Internet distribution business and so are other providers (see 3.4.4.2).

Adding the two above-mentioned developments, namely clients' increased bargaining power and suppliers' cost pressure, the travel agency industry is potentially exposed to reduced profitability. A solution to these constraining market circumstances is to make use of economies of scale and other diversification strategies.

Volume strategies require aggressive growth strategies. These are based on deliberately reducing the bargaining power of passengers and the power of the supplier airlines. In addition, utilising other size-driven cost advantages also forms part of volume strategies. The concentration trend among travel agencies is thus a logical consequence of market mechanisms. The Thomson Travel Group - owner of Lunn Poly, the largest travel agency chain in the UK, and Britannia Airways, the UK's biggest charter carrier - has been acquired by Preussag, a German service conglomerate. The acquisition makes Preussag, which also bought shares in the French travel firm Nouvelles Frontières in November 2000 and owns TUI, a tour operator, the world's leading travel group. The group has generated a turnover of around EUR 11 billion in its tourism division for the financial year 2001 (see Preussag, 2001, p. 1). A similar consolidation is occurring in the USA. The following table describes the historic and estimated numbers of travel agency entities in the USA.

Table 3.2: Number of Travel Agency Entities in the USA

Year	1993	1997	2002	2007
Annual Air Ticket Sales Clusters, USD Millions			(est.)	(est.)
0-1	14.773	13.048	7.833	5.334
1-2	4.600	5.583	4.267	2.860
1-3	1.402	19.00	1.987	1.933
3-4	638	744	890	907
4-5	316	421	633	663
5-10	599	716	793	813
>10	457	394	627	773
Total	22.785	22.806	17.030	13.283

Source: McCubbrey, 1999, p. 13

According to the above, the total number of travel agencies in the USA had decreased by about 25% in 2002, with turnover-strong agencies taking an increasingly higher share of the total market. The combination of the contraction in the number of travel agent entities and a shift away from smaller to larger operators are strong indicators of consolidation.

If the market power of travel agency groups increases in a way that they offer value added products to a certain group of clients, airlines will be mere capacity providers for the travel industry. In markets where clients have a high bargaining power, power generally shifts to those players who are closer to the customer and can generate maximised benefits. This scenario could imply that passengers' loyalty will shift from airlines to travel agencies (see Steininger, 1999, pp. 68-70).



The other scenario would involve a lesser market significance for travel agencies. If airlines manage to cut out commission-demanding travel agencies by either selling directly to passengers and/or making use of e-commerce facilities, which mainly only low-cost operators currently do, the travel agency industry would face serious obstacles. The following section discusses one of the threats to the classic travel agency business, namely electronic distribution methods.

### 3.2.6.3 Electronic Distribution Methods

Generally, three basic methods of electronic distribution can be distinguished: Electronic ticketing, smart cards and personal computer distribution methods. So far, all methods are based on information provided by CRSs, Global Distribution Systems (GDSs)<sup>36</sup>, or airline-specific distribution systems.

Electronic ticketing replaces the classic paper ticket by storing necessary information in a database. Passengers are only given a reference number or can use e.g. their credit card details as a substitute for a physical travel document. This is why electronic ticketing is often referred to as ticketless travel. American low-cost carriers introduced the system in the 1990s, which cut down on inefficient accounting and paper stock and, additionally, was an easier and more cost-effective way of distributing a ticket to a passenger. Electronic ticketing furthermore offers the possibility of curtailing commissions by circumventing travel agencies through direct, ticketless distribution, e.g. via call centres or the Internet. These commissions are, generally, according to an IATA ruling, 9% of the ticket price. This motivates airlines to use electronic tickets as a tool with which to cut the bargaining power of the distributing travel trade. Electronic ticketing is primarily used in the USA and increasingly regularly by European low-cost operators. Internationally, paper tickets are still the predominant travel document and require physical distribution.

Airlines' smart card systems are similar to electronic ticketing, but allow for a wider use. Smart cards combine check-in and boarding functions with value-added services like FFP cards, lounge access cards as well as credit card services. Smart cards in their current stage are targeted at the premium passenger segment. Loyalty enhancement is one of the main aspects of smart card use. Another advantage of using electronically integrated systems is collecting client data for CRM purposes (see Steininger, 1999, p. 73). A standardised

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<sup>36</sup> CRS have more recently started to call themselves GDS, whereas the term can also describe publicly available distribution platforms for travel related products.

application of smart cards has, however, not yet occurred and the market is far from being penetrated by smart card deployment.

The two latter electronic distribution methods are driven by airline developments and thus play an insignificant role in the bargaining power considerations of the sales market.

In most cases, personal computer distribution methods are Internet-based sales processes. On Internet web-sites, passengers can gather transportation-product-related information and book flight arrangements online. The Internet and aviation are made for each other: flights are high-value, perishable commodities on which up-to-date information can be made available electronically. Airlines thus use the Internet as an information dissemination and revenue-generating channel (see Law and Leung, 2000, p. 203). If operated by an airline or a group of airlines, this distribution method decreases commission payments to the travel trade as well as distribution and marketing costs (see Flint, *Web of Ambivalence*, 1998, p. 31 and N/A, *Webbed Wings*, 2001, p. 20). Ticket auctions are a related form of distribution via the World Wide Web. Clients can bid for selected seats on certain flights. For an airline the advantage does not just lie in cost cutting by circumventing agents, but also in using auctions as a means of distributing last minute seats or capacities to unattractive destinations or at unfavourable times. In addition, Internet ticket sales also help to build client databases with valuable passenger information. However, Internet ticket sales facilities are not just offered by airlines, but also by travel agencies. In this case, the classic trade relationships remain unchanged, although products are offered in a different, virtual environment.

A survey jointly commissioned by SITA (Société Internationale de Télécommunications Aéronautiques) and the magazine *Airline Business*, revealed that airlines are intending to take a leading role in online ticket sales. Although the Internet is a relatively new distribution channel, airlines regard it as of great importance in the sale of air transport services. The majority of the carriers in the survey expect to sell half of all tickets through web-based services within the next 3 to 5 years. Airlines intend to reduce direct sales costs and maximise online revenues by using a variety of different web-based services. These are:

- Own web sites
- General distribution system/computer reservation system sites
- Online travel agency sites
- Joint airline sites
- Auction/bid sites



- New media sites (see SITA/Airline Business, 2000, p. 14 and O'Toole, IT Trends Survey 2001, 2001)

Unmentioned in the survey were the possibilities of m-commerce, i.e. mobile phone-based transactions via e.g. wireless application protocols (WAP), or other high-speed telecommunication applications, which will become increasingly important in the wake of high-speed wireless data transfers (see Gill, *Mobile Movers*, 2000, p. 85). Airlines and CRS providers have therefore formed partnerships with mobile phone companies and mobile telecommunication service providers (see Gill, *Changing Channels*, 2000, p. 68). Internet and m-commerce ticket sales, however, are not limited to airlines themselves. As mentioned, travel agencies and other providers such as software companies and Internet Service Provider Companies and CRS and GDS operators also take advantage of this form of distribution, and offer clients a wide range of information and inter-modal travel arrangements.

Generally, the transition of the distribution market has potentially leveraged the airlines' position regarding combating challenges from the travel trade. Set against the background of e- and m-commerce-based distribution systems, carriers are now endowed with technical platforms to distribute their products directly to a wide range of passengers, thus cutting commissions and increasing load factors.

The travel trade, in turn, uses the same technology, while also able to market a traditionally wider range of service providers. Capitalising on their experience in distributing air transport services, the travel trade will not lose too much ground to airlines in sales of air tickets. This is why the bargaining power of the sales market, despite having shifted to other, namely electronic battlefields, has not changed dramatically. Furthermore, new Internet and WAP, or other high-speed data transfer developments, put pressure on CRS providers, therefore undermining the core client base and technology edge (see Gill, *Changing Channels*, 2000, p. 66). Taking into account the overall intensification of competition in sales rivalry between direct and agency-based sales, the bargaining power has not shifted in favour of either of the two.

### **3.3 Network Patterns as a Competitive Dimension**

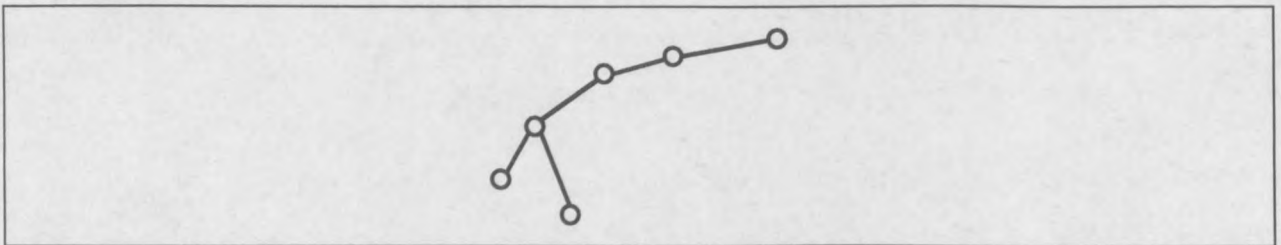
Scheduled passenger air transport is heavily dependent on a set of infrastructure provisions to safely produce the transportation product. The ability of air transport service providers to build a network is based on the choice of specific air routes and airports. Therefore, the planning of networks providing comprehensive facilities within defined boundaries, has the

greatest competitive meaning for airlines (see Faulks, 1999, p. 120). Network design is thus a crucial success factor for individual airlines and airline partnerships. In most cases, air traffic routes fit into one of three basic network types: line, grid and hub and spoke. The most common networks are subsequently described.

### 3.3.1 Line and Grid Networks

Line networks describe an aircraft setting out from its base airport and making intermediate stops en route to its ultimate destination. Stops are technically and operationally necessary for refuelling or to pick up traffic.

Figure 3.4: Line Network



Source: Hanlon, 1996, p. 70

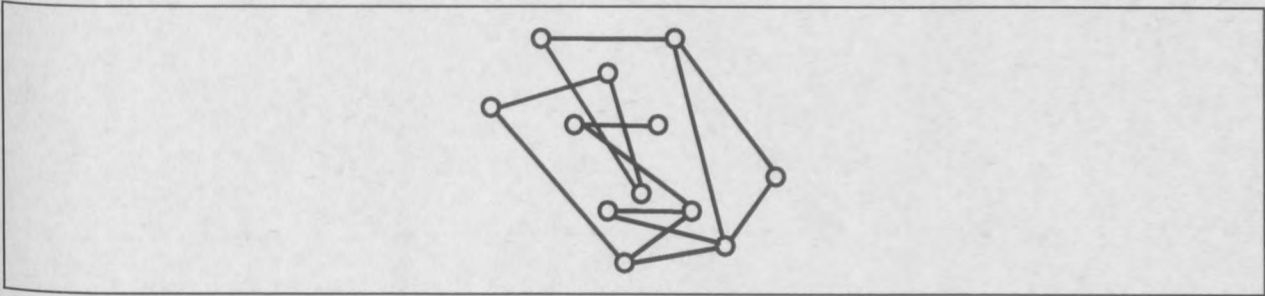
The emphasis has shifted away from line networks, as they are not operationally and economically viable. This particularly applies to incumbent carriers operating hub structures. Technically, it becomes increasingly easy to serve long-haul destinations due to longer-range equipment. Economical disadvantages of line networks lie on the cost side since airport station expenses are usually spread over a few flights, using each airport in the line very briefly and infrequently. With limited flight frequencies, average marketing costs are high, as are cockpit and cabin crew expenses in view of long stopovers at stations. Due to the long journey times, line operations have little appeal for business travellers. Revenue is thus negatively affected by poor yields, because of the low frequencies at which the services of line networks tend to be operated. On the other side, low-cost carriers have adopted the concept of line networks linking secondary airports not otherwise flown to, and offering inexpensive airport infrastructure, thus permitting higher airline revenues. As passengers can be, potentially, exchanged on each sector, passenger yields can be increased in line network structures.

Domestic markets are often served in grid networks. Networks of this kind make it easier to achieve high rates of utilisation of both aircraft and crews. Schedules allow for operation on different routes without backtracking, which maximises aircraft utilisation and minimises



crew stopovers and slippage. One disadvantage is, however, seen in the need for dispersed sales efforts in the respective markets.

Figure 3.5: Grid Network



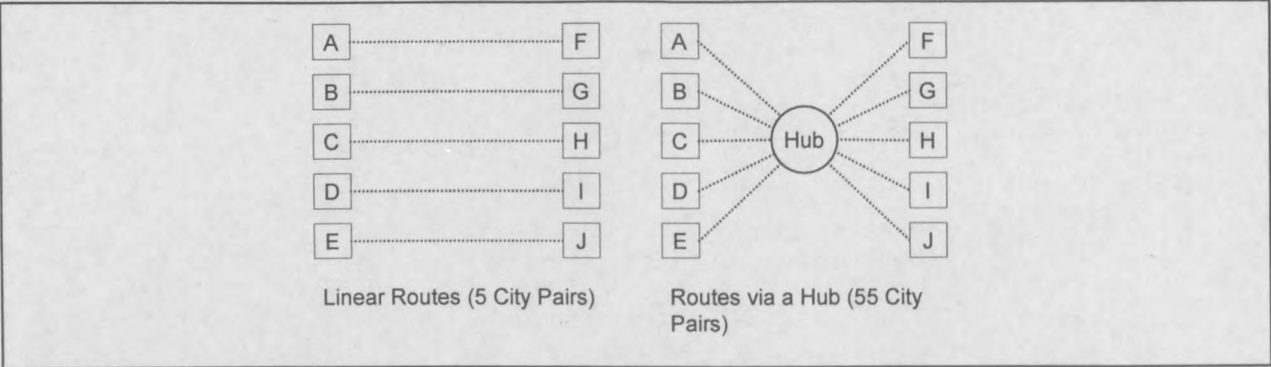
Source: Hanlon, 1996, p. 70

High capacity markets such as, e.g., Frankfurt-London, and Johannesburg-Cape Town are served in shuttling networks by which aircraft constantly shuttle between the destinations. In peak hours, the shuttle connections are supplemented by additional capacity.

3.3.2 Hub and Spoke Systems

Most commonly, airlines align their routes in hub and spoke networks in which routes radiate from a central hub to outlying spoke airports. The predominant advantage is the effect hub and spoke systems have in multiplying by permutation the number of city pairs a carrier can serve. Hub linkages allow for a much greater number of available city pairs than directly serving them. This leverage of hubs in generating city pair connections and feeding them with traffic was a prime motive for the thoroughgoing change from line and grid networks in the deregulated US domestic market (see Williams, 1993, pp. 18-28). In addition, hub systems allow for frequent services in city pair markets, whose traffic density would not otherwise support them. The figure below visualises the increasing number of available city pairs, if linked via a hub. Five direct services in the example are being replaced by connecting hub services, resulting in an eleven-fold increase in the number of linked city pairs.

Figure 3.6: Direct and Hub and Spoke Services



Source: Hanlon, 1996, p. 71

Among the basic hub and spoke set-ups, several sub types can be distinguished:

- Hourglass hub: flights from one region operate to points broadly in the opposite direction (see Hanlon, 1996, p. 72).
- Hinterland hub: short-haul flights feed connecting traffic to the longer trunk routes. Hinterland hubs thus serve as multi-directional distribution centres for air travel to and from their surrounding catchment areas. They usually require a change of inventory from regional aircraft to long range jets (see Hanlon, 1996, p. 72).
- Secondary hub: in addition to a primary or central hub, an airline operates a secondary hub from where other markets are served (e.g., Lufthansa with its main hub in Frankfurt (FRA) and secondary hub in Munich (MUC) (see Pompl, 1998, p. 337 and ter Kuile, 1997, p. 71).
- Gateway hub: a main hub that serves as a gateway into a country, region or a continent.
- Mega-hub: hubs being used by several carriers as a central hub, or multi-hubs for a continent (e.g. London Heathrow (LHR), Frankfurt Rhein-Main (FRA), Paris Charles de Gaulle (CDG), Amsterdam Schiphol (AMS) (see Pompl, 1998, p. 337).

Primary hub operations are usually structured around the operational and commercial bases of carriers, which usually explains their dominance in these markets. Examples of the dominance of carriers at hubs are shown in the following table.



Table 3.3: Airlines’ Hub Dominance

Airport	Code	Proportion of Flights carried out by lead three Carriers		
		Carrier 1	Carrier 2	Carrier 3
Atlanta Hartsfield International Airport	ATL	Delta 73,5%	AirTran Airways 10,9%	US Airways 2,3%
London Heathrow	LHR	British Airways 38,2%	British Midland 13,4%	Lufthansa 3,7%
Frankfurt Rhein-Main	FRA	Lufthansa 60,8%	British Airways 2,7%	Condor Flugdienst 2,5%
Johannesburg International	JNB	South African Airways 56,6%	British Airways 13,9%	Nationwide Air 7,2%

Source: Baker, Return to Growth 2000, pp. 56-57

The ability to build hubs is an important success factor. Hub building increases cost efficiency by smaller unit costs of the air transport product. In addition, through the centralisation of tasks such as maintenance, catering and other operational and commercial services, as well as pooling of further productive resources, extra benefits can be achieved. Economies of scope and synergies can additionally be attained by increased passenger volume through feeder services. Considerable economies of density can be derived through the better utilisation of aircraft and flight crews (see Williams, 1993, p. 18).

Hub and spoke systems warrant higher market power for the hub carrier in markets which are served by direct flights from or to the respective hub (see Borenstein, 1989). This quasi-monopoly, or oligopoly situation usually results from only one, or very few, carriers using a hub and direct city pairs, which are usually not offered by any other airline. This is why airlines can charge higher fares on hub-connecting routes which are generally referred to as “hub premiums” (see Reynolds-Feighan and Berechman, 1995, pp. 273-275 and ter Kuile, 1997, p. 67).

Airlines do, as a result of these market advantages, develop their hubs into competitive strongholds, so-called “fortress hubs” with high competitive entry barriers (for a thorough discussion, see Zhang, 1996, pp. 293-307). Carriers precede their operationally superior position by capitalising on distribution dominance in the travel trade and through strong passenger loyalty schemes in the markets they serve (see Steininger, 1999, pp. 34-36). New entrants tend to find that entering the market of the locally dominating carriers at their respective fortress hubs is a laborious process. Market entry barriers are comparatively high as a result of a lack of slots, terminal space and the possibility for incumbents to dump fares and increase frequencies (see Pompl, 1998, p. 338). Some US airlines even control airport expansions at their hubs through majority-in-interest clauses. Endowed with veto rights in

respect of terminal developments, incumbent carriers can actively steer the assignment of terminal space to prospective new entrants (see Woerz, 1996, p. 43). US American hub markets are well penetrated with even smaller commuter carriers solely shuttling traffic into the incumbent's hubs. Thus new entrants often find themselves in a situation of being mere feeder carriers for a larger airline, or airline network, and are eventually exposed to horizontal integration (see Woerz, 1996, p. 43 and p. 48).

Some passengers feel hub and spoke services are attractive since they increase the number of direct connections ex hub. Scheduling the connectivity of flights results in a relatively high number of destinations being served. Connectivity thus describes the quality of flight affinities at a given hub and measures the average number of possible connecting flights for each incoming flight in a given time frame. This time frame's lower threshold is the minimum connection time,<sup>37</sup> while the upper threshold is between 2-3 hours, with only geographically viable connections being counted. A perceived passenger disadvantage is the fact that connecting flights increase travel time.<sup>38</sup> Transport costs of connecting flights are higher for airlines, since elevated airport fees and charges as well as fuel costs occur.<sup>39</sup> The cyclical wave traffic structure can lead to overcrowded hub airports at peak traffic times, which can also put a strain on the airport's infrastructure. Delays at hub airports have, as scheduling is integrated, an effect on the entire traffic system (see Pompl, 1998, pp. 338-339). Consequently, direct point-to-point connection is the passenger's preferred choice. This trend, an aspect of fragmentation, is expected to continue into the future, particularly with gateway hubs increasingly losing significance.<sup>40</sup>

### 3.4 The Air Transport Products/Services

In comprehending product and production requirements of air transport, it is important to highlight the unique features of the air transport product/service.

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<sup>37</sup> Minimum connection time for a passenger to change flights. This time includes baggage claims, transportation to the next gate and check-in procedures (see Steininger, 1999, p. 260).

<sup>38</sup> For travel time, see chapter on customer needs and perceptions (3.4.2.1).

<sup>39</sup> See also above for economies of density of hub and spoke operations (3.3.2).

<sup>40</sup> For example, in 1977, all of the Europe to Asia non-stop traffic went via only three routes. Today, the top 10 routes carry only 43% of the interregional non-stop service. On the North Atlantic in 1977, 36% of the traffic was carried via the top 10 routes. By 2000, the percentage had dropped to 22% as new city pairs developed. Transpacific traffic shows a similar pattern, with a decline in traffic on the top 10 routes from 91% in 1977 to 44% in 2000 (see Doganis, 2001, p. 8).



### 3.4.1 Specific Characteristics of the Air Transport Service

Airlines produce a service that covers the carriage of passengers, mail and freight. The following aspects identify some of the particular characteristics of air transport (for the general structure of the following, see Hunziker, 1983, p. 79-87 and Pompl, 1998, pp. 37-44).

#### *Intangibility and immaterial disposition*

As with all services, the air transport service is intangible as well as abstract and immaterial and, being consumptive, can only be enjoyed for a limited time. Passengers are thus not endowed with the opportunity to fully scrutinise the service prior to consumption - they merely purchase a servicing promise. The quality of the purchase at the time of acquisition is difficult to determine (see Jäckel, 1991, p. 80). This in turn affects the airline's market communication and brand building ability to redress probable consumer insecurities.

#### *Simultaneity of production and consumption*

Transportation services are, spatially and chronologically, simultaneously produced and consumed, i.e. the production of a seat or tonne kilometre coincides with its consumption. Unsold and unused seats, or freight capacity are considered lost and irretrievable production units. This constellation makes air transport a perishable good and requires well-developed production planning and flexible distribution systems (see Diegruber, 1991, pp. 108-109).

#### *Service Design*

The elementary service of air transport is, despite a variety of market players and their differentiation, a homogenous one. A commodity situation occurs, with customers not perceiving any major significant product differences and regarding the products of competing suppliers as virtually identical (see Shaw, 1990, p. 156). This is why direct and related services, pre-, in- and post-flight, play an important role in diversifying an airline's offer in the air transport marketplace.

#### *Batch-Production*

The total production output of the service cannot be altered on a short-term basis, as it is always dependent on a given seat or cargo capacity. The production flexibility is, furthermore, lessened by the range and technical specifications of the aircraft, thus any increase in capacity can only be achieved in discrete steps according to the equipment deployed.

### *Joint Production*

The production of cargo capacity - so-called belly cargo - is a joint product with the production of seat capacity in passenger aircraft. Construction constraints prevent the use of the entire passenger aircraft space for passenger transport, which leaves areas for freight. However, joint production does not apply to freight aircraft. Marginal costs of the joint production are not zero, since they are determined by selling - and handling-costs, which are driven by the freight volume and nature of the freight.

### *Limited Market Entrance*

The following aspects limit market entrance for new producers of air transport services (see also above):

- National regulations and concessions
- Proof of aircraft airworthiness
- Availability of traffic rights
- Intensity of investment
- Technical complexity
- Structural and market inherent barriers
- Strategic entry barriers

### *High Technological Turnover*

No other industry has such highly mobile assets representing a major portion of the total assets. These assets are exposed to a re-equipment cycle for technological advances and competition, leading to enormous amounts of capital spending (see Wells, 1994, p. 205).

### *Subsidised Competitors*

Despite the increasing trend of deregulation-driven privatisation, some carriers are still fully or partly state-owned and therefore receive subsidies for economical and political reasons. For new market entrants and other, non-subsidised, carriers, these unbalanced competitive circumstances can lead to even higher entry barriers.<sup>41</sup>

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<sup>41</sup> The US Government granted approximately USD 15 billion to the US airline industry after September 11<sup>th</sup>, 2001. These state-subsidies were primarily used to subsidise ticket sales, creating biased competitive situations, especially on the North Atlantic route.



### *Demand Structure*

The demand for air transport services is highly susceptible to the economic cycle and the political environment. Correlation has been proven between national armed conflicts, the economic situation as well as terrorist attacks and demand fluctuations for air transport (e.g. the Gulf War in 1991; see Wells, 1994, pp. 206-207 and the results of September 11<sup>th</sup>, 2001).

### *Seasonal and Route-specific Demand Fluctuations*

Demand for air traffic services is highly dependent on the seasons and differs on different weekdays and even hours - the so-called waves of flights. Demand fluctuations for routes do occur in respect of freight services. A high freight load factor to a destination does not imply a similar load factor on the return route.

### *Sensitivity to Load Factors*

The proportion of fixed costs in aviation is very high. Passenger air transport totals approximately 85% fixed costs and only 15% variable costs. This means that the financial success of a route is very sensitive to fluctuations in load factors.

### *Safety and Security*

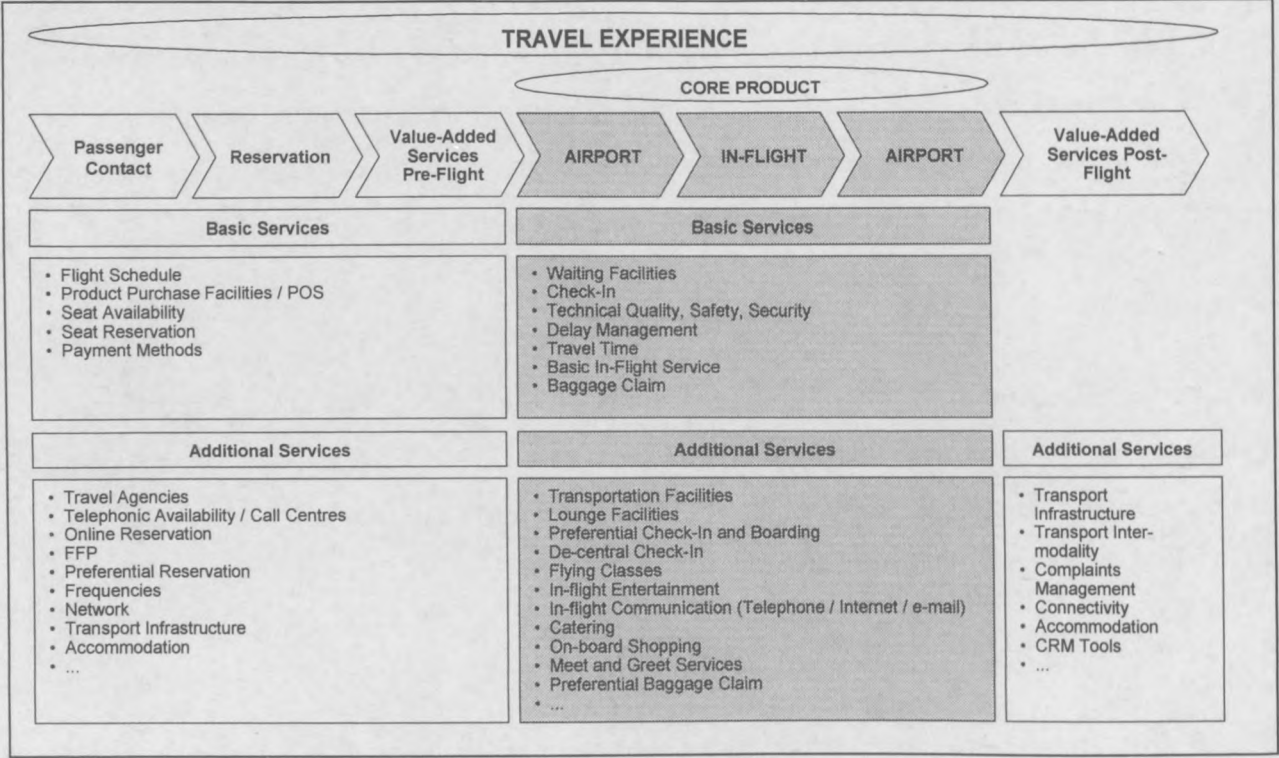
Air transport is very dependent on traffic safety as even small technical faults or human errors can cause accidents that frequently lead to high numbers of fatalities and substantial material damage.

With the aforementioned broadly summarising air transport service characteristics, the following focuses in more detail on the design of air transport services and the differentiation potential.

## **3.4.2 The Air Transport Service Value Chain**

The range of services in the air transport industry has historically changed from solely carrying passengers and goods, to a chain of value added offers. Airlines supply services far beyond the actual transport product. Being focused on various travel-related client needs, airlines seek to increase their success by adjusting the width of their product and marketing mix accordingly. The following figure visualises some standard components of the core product and value-added features of the travel experience.

Figure 3.7: Air Travel Experience



Source: own compilation

Basic services are prerequisites for a functioning travel experience. They have to be provided in order to ship the passenger and luggage safely and conveniently as well as in compliance with safety and security standards from origin to destination. Within the competitive group of airlines, the basic product has become a homogenous commodity. This is why airlines use their individual value chains as differentiation tools and additionally supplement/enhance their products by adjoining extra features. A comprehensive list of these additional features is impossible to compile, as they largely depend on an airline’s individual creativity in seeking distinct air transport service uniqueness. The above thus only gives selected possibilities with regard to additional product features. The following, however, describes some of these aspects in greater detail.

3.4.2.1 Customer Needs and Perceptions

Air transportation is undoubtedly a service and passengers do not necessarily perceive a flight as a rational process and a low-involvement product, but paired with much emotion. These emotions can be generally positive and related to issues like speed of travel, inflight service and the luxury appeal of “jet setting”. Emotions are, however, also affected by safety and security concerns and can lead to the perception of being at the technical equipment’s mercy. Hence, airlines strongly focus on the satisfaction of specific customer needs and, as part of



market segmentation processes, on precisely designing beneficial and satisfactory features of the air transport product (see Netzer, 1999, p. 121).

The award "Triple Crown" in the USA describes factors leading to passenger contentment. It is awarded to airlines on the basis of customer satisfaction in the categories: punctuality, amount of baggage damage and losses, and efficiency in handling complaints. These elements reflect customer orientation and a service culture as a central success factor (see Klein, 1996, p. 14). In essence, the factors should ultimately lead to passenger loyalty towards a carrier, and repeated purchase of the airline's products. Other authors come to the conclusion that reliability based on demand satisfaction, post satisfactory experience and price are the most important reasons for selecting an airline (see Kaynak et al., 1994, p. 244). The sensitivity to price, however, varies with the purpose of the trip and obviously the booking classes travelled. It is therefore rather puzzling to define overall customer needs and perceptions without focusing on various passenger market segments (for an overview of different methods of analysis and research focus see Netzer, 1999, pp. 122-138).

An underlying main aspect of customer needs is travel safety and security. As described earlier, it is a well-known fact, that air travel is generally safe, with the contingency that when accidents do occur, the number of fatalities is usually very high. Aircraft crashes are commonly very prominent events, having a significant impact on passengers' perceptions towards an airline or particular equipment. After a series of crashes of DC 10 aircraft in the 1980s, air travellers became more sensitive towards the equipment used by carriers. The crash of a Turkish charter aircraft hired by a German tour operator off the Dominican Republic in 1996 ignited a widespread discussion concerning the technical safety of some low-cost holiday airlines in Europe. The most prominent aircraft accident in mid 2000 was the crash of a supersonic Concorde jet of Air France in Paris. The crash and the subsequent investigations lead to the grounding of the entire Concorde fleet of both operators, Air France and British Airways. The most drastic impact on global air transport, however, was ignited by the terrorist attacks in September 2001 in the USA. Besides the dramatic loss of lives caused by the incident and the political and economical consequences, airlines and airport authorities were forced to completely re-evaluate their security strategies.

Lack of air transport safety information is thus still a topic heavily discussed by consumer advocates, who claim that too little is done to give passengers the opportunity to investigate airlines' safety standards (see Köhne, 1997, p. 27-28). It is feasible that well-known brand names convey an image of safety and reliability and, consequently, signal quality. In this

context, brand names could be hostages to the risk-averse buyer, especially. In communicating to the consumer the identity of the producer, and who to sanction should the product not perform as expected or promised, the brand name serves as a quality assurance device. However, if the product does not satisfy the expectations of the passenger, the brand will be negatively affected.

A company’s focus on technical excellence and its attitude towards satisfying customer needs, resulting in its delivered customer service, is reflected in aspects of the service that a company chooses to measure. For Lufthansa, these are as indicated by the following table (see N/A, Lufthansa: the Challenge of Globalisation, 1996, p. 12 and p. 19):

Table 3.4: Service Measure Index (Lufthansa)

<ul style="list-style-type: none"><li>• Telephone availability in Germany</li><li>• Telephone availability internationally</li><li>• Sales service quality</li><li>• Waiting time at check in</li><li>• Friendliness and efficiency at check in</li><li>• Take-off punctuality continental</li><li>• Take-off punctuality intercontinental</li><li>• Delay caused by maintenance</li><li>• Information during delay</li><li>• Condition of cabin</li><li>• Friendliness and attention in cabin</li><li>• Seat comfort</li><li>• Menus (including snacks and gate buffet)</li><li>• Waiting time/baggage reclaim Germany</li><li>• Miles &amp; More (Lufthansa’s FFP) mileage re-crediting</li></ul>
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Source: N/A, Lufthansa: the Challenge of Globalisation, 1996, p. 12 and p. 19

This list could easily be extended according to an individual airline’s specific focus on differentiation of the basic service. Other factors, based on changing social values and new scientific aspects, do influence basic demands towards the air transport product. Issues like the medical implications of flying and environmental concerns have impacted the design of the basic air transport service in recent years (see Köhne, 1997, pp. 28-29).

One of the travellers’ key selection criteria in favouring a flight is travel time. This applies especially to business travellers (also see in Lufthansa’s Customer Service Index). Travel time, as a feature of the standard airline product, does not just entail the flying time alone, but the total travel time from the beginning of the journey until its end. Therefore it is important to distinguish fundamental elements of total travel time (see Steininger, 1999, p. 197):



- *Schedule wait time* describes the time from the desired beginning of the journey until the actual start of the trip. For example, if a traveller desires to depart at 07:00 a.m., but for scheduling reasons can only leave at 09:00 a.m., the schedule wait time is 2 hours. Schedule wait time is usually decreased by hub and spoke systems and high frequency airports.
- *Airport access time* is the time needed from the starting point of the journey to the airport and from the airport to the end-destination. Airports linked to other means of transport, especially public transport, enjoy higher passenger preference.
- *Flight time* describes the duration between the scheduled departure time and the actual arrival time at the destination airport. Flights are influenced by, amongst others, delays of the scheduled departure time, due to late feeder flights, bad weather, ATC problems, overcrowded airports as well as technical difficulties. Mere travel time is the actual period spent airborne. This depends on the distance, the type of aircraft and delays in the course of the flight caused by weather circumstances, ATC or technical problems. Flight times can potentially be increased by hub and spoke systems, as those networks are very susceptible to delays because of the wave structure of flights.
- *Waiting time for connecting flights* is the time a passenger has to spend in a hub waiting for a connecting flight. Hub and spoke systems increase this waiting time. Direct point-to-point connections are thus preferred by passengers.
- *Denied boarding time*. If a passenger has to wait for another flight because the flight he or she is booked on is overbooked, the denied boarding time adds to the total travel time (see Tretheway, 1992, p. 19).

Another standard product feature passengers prefer is high frequencies. High frequencies decrease schedule wait time by offering passengers flights at desired times. The frequency elasticity for a city pair market is especially significant for business travellers (see Beyhoff, 1995, p. 129 and Steininger, 1999, p. 200). Consequently, frequencies are an important differentiation feature for an airline in a city pair market. A carrier offering more direct city pair connections at attractive daytimes than some other operator will particularly enjoy business passengers' preferences.

Single carrier (online) connections are, after deregulation and the establishment of hub and spoke systems, a regular feature in air traffic. Online traffic represents an increase in product quality for passengers. A co-ordinated schedule leads to a minimised total travel time. Other advantages include less walking between gates and the perceived willingness of a carrier to

wait for its feeder service in a case of a delay. Baggage transfer is easier and more secure and the passenger has one counterpart to relate to with any kind of problem.

#### 3.4.2.2 Value-added Services

Value-added services are generally features airlines offer in addition to the core transportation service. These amenities can be derived from core and non-core airline business areas and are used to differentiate an airline's product, thus to give it a unique touch.

Separable value-adding businesses related to the core passenger activities can include specialised catering service, or tax free onboard shopping as well as exceptional airport and inflight infrastructure provisions. These offers, as in respect of check-in, lounge facilities, and baggage claim, can be associated with designated treatments of premium class passengers, or an allocation of value-added features for all passengers, deriving from technical feasibility or creative processes, e.g. individual TV, onboard communication facilities like telephone, Internet and e-mail, or even onboard massages.

Businesses that exploit the customer franchise and make use of extensive customer contracts and CRM are another form of diversification and can usually be found as part of the non-core area of the travel experience. New businesses that leverage an airline's existing skills and capabilities are considered to be one of the richest areas of future growth. Such businesses would include linking and vertically integrating the airline service with, for example, the railway infrastructure or accommodation offers (see Woodley et al., 1998, p. 34).

According to their horizontal position as part of the travel experience, value added services can be divided in pre-, in- and post-flight services and can take multiple forms (see also Klein, 1995, p. 266).

##### *Pre- and post-flight services:*

- Booking and travel services through 24-hour call centres and Internet-applications
- Intermodal transport services
- Chauffeur services
- Curb-side check in
- Ticketless travel, speed-check in
- Lounge services, waiting and pick-up lounges
- Communication services
- Accommodation services



- CRM applications
- Loyalty schemes

*Inflight services:*

- Choice of equipment
- Leg space and seat design
- Cabin design
- Cabin crew outfit/appearance
- Individual video screens
- Interactive inflight entertainment systems, Internet, e-mail facilities
- Individual phones and fax facilities, or phone booths
- Shopping offers
- Individual work spaces
- Special catering offers, meal choices
- Snooze zones for passengers who want to sleep during night flights
- Facilities to get a manicure and a shoulder massage (e.g. Virgin Atlantic see Shifrin, Atlantic Luxury, 2001, p. 51)
- Stand up bars, lounge areas

The above-mentioned inflight product differentiation features are targeted at premium class travellers in many instances. However, a trickle-down effect of product design can be observed. Individual entertainment systems and communication technology were once limited to premium classes only, but with wider and more cost-effective availability of the necessary technology, they also proliferate in economy classes.

However, leading product differentiation has not always been targeted at premium class travellers. Some low-cost airlines modify their product for all passengers and offer light and “no-frills” services. By deliberately cutting down on inflight service features - e.g. the infamous peanuts on Southwest Airlines - carriers convey a message of the uniqueness of their product and thus corroborate their low-fare strategy. In this sense, service design does not necessarily follow the rule of upward product alteration but can also go the opposite way.

In this context, it is also a common misbelief that airlines gain sustainable market share by adding frills to their product. Competitors can relatively easily match frills, resulting in cost

hikes with no or little sustainable compensating increases in traffic<sup>42</sup> (see Shaw, 1990, pp. 155-156). To somehow escape the dilemma of easy imitation of product features and being perceived as the producer of a commodity, airlines continuously have to create awareness of their brand. Tangible brand values, embodied by the above-mentioned value-added product features and psychological differences in the perception of a carrier, lead to a leveraged position for a carrier to capitalise on value-added offers. Provided that a passenger is satisfied with the products and the services of an airline, it is easier for the passenger to stick with the current choice. Since the traveller already knows certain procedures and quality features, that person, as a risk averse buyer, might avoid the costs of searching for substitutive or competitors' products.

### **3.4.3 Loyalty Programmes as a Competitive Feature**

Building preference for one brand over another is seen as a key requirement of airlines to survive in the competitive industry. The marketing tool loyalty programmes has been developed to retain a passenger once this person is convinced of a particular airline's products and to reap from the distribution chain's loyalty.

Essentially, there are three kinds of schemes airlines use to exert market power by binding the passenger and by controlling and giving incentives to distribution channels. These are frequent flyer programmes (FFPs), agency loyalty programmes (ALPs) and corporate loyalty programmes (CLPs).

#### **3.4.3.1 Frequent Flyer Programmes**

Since the introduction of the first frequent flyer programme (FFP) by American Airlines in 1981, passenger loyalty programmes have established themselves as one of the most important marketing tools for airlines (see Gilbert, 1996, pp. 577-578).

FFPs are bonus systems in which passengers are rewarded for repeated patronage of an airline or airline-related products. Members of FFPs receive premiums, usually in the form of miles or points reflecting the distance travelled and the booking class flown on the issuing carrier or one of its partners. In addition, passengers can accrue premiums when using services and

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<sup>42</sup> In this context, an often cited example is the offer of free alcoholic drinks to economy class passengers in the USA in the late 1970s. At the outset, airlines offering alcoholic beverages enjoyed substantial hikes in market share, which they lost again as other competitors imitated the offer. The result was that market shares fell back to their previous levels. However, by then airlines were incurring the cost of free drinks whilst earning no additional revenue (see Shaw, 1990, p. 155).



products affiliated with the airline's FFP. Among these are financial services, accommodation offers, car rental or other transportation arrangements, telecommunication products or shopping at selected outlets.

The width of related services varies with the airlines' ability to acquire partners for their programmes and their willingness to distribute their own loyalty schemes through other services. Airlines sell miles as part of FFP partnerships to the respective industry partners who, in turn, incorporate them in their own incentive strategies (for different kinds of relationships between FFP partners, see Petersen, 1997, pp. 38-39). Miles or points accumulated entitle the passenger to redeem them - once a certain threshold has been passed - for an award which can be a free or discounted flight, upgrade to higher classes, concessions on car hire and hotel accommodation, to purchase recompense products and other benefits. Thus FFPs are a specific form of financial rebates to loyal clients and could be regarded as discounts for quantity purchases.

Discount considerations as a motivational aspect for passengers in FFP awards are demonstrated by the following example:

Assuming one return flight ticket from Cape Town International (CPT) to Frankfurt Rhein-Main (FRA) on SAA costs about ZAR 5,000 and SAA awards 12,000 miles in its "Voyager" FFP scheme for this flight. The total mileage a passenger would need to redeem an intercontinental bonus flight in economy class on the same route is 60,000. One fifth of the bonus flight has therefore already been accumulated by one flight (excluding the enrolment bonus to the FFP). In monetary terms, flying on the awarding airline would give the passenger a rebate of ZAR 1,000.<sup>43</sup> The discount considerations can obviously be used as a marketing tool to justify slightly higher fares by the FFP-issuing carrier and thus also reducing passenger price elasticity (see Hanlon, 1996, p. 48).

One important component of FFPs is their acquisition function. Acquisition of new passengers is perceived to be easier once an airline can offer a valuable and well-positioned bonus programme. Acquisition, however, goes hand in hand with the function of passenger retention to an airline's product and the FFP itself (see Schmengler and Thieme, 1995, p. 131 and Gilbert, 1996, p. 579). Motivational aspects of passenger attraction to FFPs are the range

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<sup>43</sup> Assumptions are that mileage accrual on this flight is allowed by booking restrictions and that the passenger counts on using awards in the validity period of the award miles.

of the choice of rewards, e.g. choice of flight destinations or other rewards, the aspirational value of the reward, e.g. exotic travel as opposed to pure cash-back offers and the perceived likelihood of achieving the rewards, i.e. the mileage threshold for an award ticket, and the scheme's ease of use (see Dowling and Uncles, 1997, p. 76).

In addition to the loyalty purpose of FFPs, they also help to gain valuable passenger information for market research purposes and direct marketing. Linking passenger information with revenue information is an important IT challenge yet to be met, but promises more accurate facts on travel behaviour and revenue contribution of FFP members. This is why FFP is seen as one of the main pillars of a working airline CRM (see Schmengler and Thieme, 1995, pp. 131-132, Gilbert, 1996, pp. 579-582, Flint, *Value beyond Miles*, 2000, p. 32).

With high yield and high frequency business passengers, the capturing effect of FFPs works exceptionally well. The principal-agent conflict works in favour of the airline. This conflict theory describes the purchasing habit regarding travel products that can still be found among many corporate travellers. A principal, i.e. the fare-paying employer, pays for travel expenses, but leaves the choice of the carrier and the travel frequency to the agent, i.e. the business traveller. The latter, in turn, can privately take full advantage of the benefits accrued by being a member of a FFP. This motivates a business traveller to choose an airline which appears most attractive regarding individual benefits and not necessarily the most cost-effective one (see Hanlon, 1996, p. 51 and Steininger, 1999, pp. 209-210). Companies have realised this inefficient and, at times, unnecessary pattern of travel services use and, consequently, increasingly tend to centralise their travel agency services and to collect miles accumulated by business flights for themselves.

Holiday travellers and less frequent travellers are increasingly attracted by FFPs. The rules that only full economy or premium fares are eligible for mileage accumulation have changed, with carriers allowing miles to be earned on all travel, albeit at different rates and depending on the fare category.

Usually FFPs are designed to only be beneficial for passengers once they use a limited number of participating carriers, or use the services of selected FFP partners. Awards are only granted once a certain mileage threshold has been passed and in some FFPs benefits have a



limited validity in a mileage account.<sup>44</sup> The award structure is not linear. The marginal value of the rewards increases as the passenger builds up more and more miles on the account. FFP participants are furthermore divided into distinct tiers according to their mileage balance, or their annually accrued miles.<sup>45</sup> The membership of a tier level allows the passenger to be awarded additional entitlements such as, among others, dedicated check-in areas, lounge access, preferential baggage handling and baggage weight allowances. This increases loyalty considerations and makes the passenger a hostage to the FFP, as switching costs in terms of lost rewards and benefits apply if the passenger should transfer his patronage from one airline to another.

The advantages of network size for an airline's FFP are fairly clear. Large networks give passengers more opportunities to both earn and use accumulated miles. This creates economies of scope regarding the award structure for passengers, if an airline offers a wide spectrum of destinations - preferably at its own hub - originating at the passenger's home destination. FFPs thus create strategic advantages for carriers and partnerships with an extensive network (see Gallacher, *Power to the Plans*, 1997, p. 34). Loyalty schemes even reinforce the advantages of large networks and thus pose a market entry threat to smaller carriers. This is because FFPs encourage passengers to fly with the carrier that gives them the best bonuses and thus a good rebate.

All major airlines have FFPs - usually under distinct brand names. British Airways' "Executive Club", Lufthansa's "Miles & More" or Swissair's/The Qualiflyer Group's "Qualiflyer" have established themselves as strong individual brands. Thus FFPs allow airlines to add a less likely to be imitated feature to their existing range of products.

#### 3.4.3.2 Agency Loyalty Programmes

Agency loyalty programmes (ALPs) work with mechanisms similar to FFPs. These programmes enjoy a leveraged preference among their clients, if they are offered by a large carrier or larger group of airline partners.

As described in previous sections, the travel industry altered its objectives as a result of deregulation. Liberalisation transformed travel agencies from ticket sales outlets to

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<sup>44</sup> The minimum mileage amount for awards at SAA is 20,000. Discrete mileage thresholds for particular rewards thereby represent the key loyalty-generating aspect of FFPs.

<sup>45</sup> A colour code system applies at some FFPs that is similar to that of credit cards. BA's Executive Club, for example, distinguishes between Blue, Silver and Gold Status.

information brokers. Infrequent travellers may struggle to understand the complex fare and schedule structures, and how to extract all information pertinent to a travel decision. On the one hand, travel agencies using CRSs and offering online booking facilities can distil relevant information, but influence customer choice by only providing a limited set of air transport service alternatives. Habitually, travel agencies tend to offer clients products of airlines that pay out the highest relative commission. This is the underlying reason why airlines have established ALPs to influence booking behaviour in their own favour (for a discussion of agency relationships, see United States Department of Transportation, 1999, pp. 12-13).

ALPs comprise the same economies of scope for the travel trade that FFPs proclaim for passengers. The tools with which to influence agencies' booking behaviours are commission override agreements. Usually, travel agencies receive a fixed percentage of total sales or a maximum amount as commission.<sup>46</sup> Overrides, however, introduce a non-linear gratification structure whereby once the agency has reached a sales target, provisions are paid out not just on the additional sales beyond that point, but also on those already made within the year in question (see Hanlon, 1996, p. 53). Sales quotas can be set for particular routes or overall sales levels, for sales in different classes and sales in comparison with the trade achievements of other peer agencies. These sales thresholds lie above those that the agency vended for the airline in the previous period. This is to give the agent an incentive to sell even more than in the foregoing term. Above these basic sales targets are other thresholds, which, once surpassed, guarantee higher commissions. These commission payments usually grow discretely and disproportionately with the agency's revenue. Some overrides work on "on the spot" mechanisms, which are used by carriers to promote selected routes from certain markets for a limited period of time" (see United States Department of Transportation, 1999, p. 7). Again, similarly to FFPs, ALPs are given brand names to equip them with a higher status and visibility among agency clients. Lufthansa, for example, calls its ALP "PartnerPlus".

Airlines' sales targets for travel agencies depend on their dominance in the market. The more dominant an airline's position in the market, the easier it is to sell its products. This is why it is very important for an agency to qualify for an override programme of an airline or several airlines that have a high market share among the clients of the particular agency. It can thus

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<sup>46</sup> In the German travel industry, the average commissions paid out by airlines were 9% of the ticket price excluding taxes and other fees (see Pompl, 1998, p. 239). In the USA, many carriers pay a maximum standard commission for domestic flights of USD 25 for a one-way and USD 50 for a return fare (see United States Department of Transportation, 1999, p. 3).



be beneficial to support the already dominating carrier. This disadvantages smaller carriers, or carriers with little regional market share and new entrants. Smaller carriers cannot guarantee agencies substantial income through commission overrides. Even if smaller carriers could offer agencies a higher commission percentage, the potentially generated revenue would still be lower than that of larger carriers, due to their wider product range. In the case of “on the spot” overrides, incumbents try to actively fight carriers’ market entrance in selected city-pair markets.

Airlines give further incentives to travel agencies to influence their booking behaviour. Free or rebated tickets, lounge access, free holidays and educational trips for agency employees are only a few tools to encourage the travel trade to sell a specific product. Preferential overbooking possibilities give agents the chance to book seats for important customers even though CRSs do not show open seats. CRSs can additionally be furnished with system enhancements providing operating efficiencies and emphasising override-paying airlines through restructured screen-displays or through highlighted or pop-up reminders to agents (see United States Department of Transportation, 1999, p. 5 and p. 10). Abandoning all sense of impartiality, agents might lead unsuspecting clients to sub-optimal choices merely in order to meet override targets. This is why overrides are regarded as detrimental to consumer interests if the passenger is not aware that an agent acts as the preferred distributor for one airline (see United States Department of Transportation, 1999, p. 3). In this regard, it can be questioned, whether travel agencies manage to maintain their neutral seller-agent relationship, or whether they are fulfilling the role of a direct distribution agent for a particular carrier.

However, travel agencies’ commission overrides do not have unlimited possibilities. In the long run, booking behaviour in favour of only one dominant carrier would decrease the carrier’s commission payments. On the other hand, passengers can sanction the booking patterns and consultation of an agency once they feel that the consultation is not objective and only favours one specific carrier. More recently, the possibility to use Internet-based facilities to purchase flights directly from the carrier, or from third party air travel providers reduces the effectiveness of ALPs even more.

#### **3.4.3.3 Corporate Loyalty Programmes and Corporate Rebates**

Corporate Loyalty Programmes (CLPs) are tools through which airlines try to enhance their corporate clients’ loyalty. They are bonus systems granting rebates for high volume patrons. CLPs are granted in terms of ascending thresholds in relation to the number of journeys made,

or the amount of money spent, on the services of a particular airline within a specific period of time. The non-linear gratification structure is similar to that of ALPs, with companies qualifying for progressively increasing discounts once thresholds are exceeded. Special incentives for certain periods or routes or in special markets also apply. CLPs are not just offered by airlines; many companies or organisations enter these rebate schemes voluntarily and initiate the negotiations themselves.

The term CLP is also used to describe the corporate use of FFP benefits. As pointed out earlier, the accrual of individual FFP rewards originating from corporate flights is being discussed as counterproductive to decreasing corporate travel expenses. Some companies have thus completely banned the use of FFPs on corporate flights in exchange for discount allocations, or FFP rewards are centrally collected and shared by all employees (see Hanlon, 1996, pp. 51-52 and Bhagwanani, 2000, p. 88).

Airlines that have the best product range locally are in a favourable position to attract many big corporate customers. The potential of CLPs to influence corporate clients' air travel patterns is even larger than that of FFPs. As companies with CLP agreements usually issue strict travel rules to take full advantage of the discount allocation, the individual business traveller can no longer personally decide which carrier to use, which decreases the principal-agent conflict described above (see Steininger, 1999, pp. 217-218).

### **3.4.4 Competitive Distribution Facilities**

As part of the basic air transport service, airlines do have to provide, or at least make use of some sort of device to present their products, check availability, make reservations, quote fares, sell, issue tickets and book seats on their flights. Thus these systems provide information transfers regarding logistical functions. The following explains two related services: computer reservation systems and the more publicly available online reservation systems and their specific implications for scheduled passengers in the air transport industry.

#### **3.4.4.1 Computer Reservation Systems**

Airlines started distributing their products using electronic data processing methods in the 1960s and 1970s. Back then, these individual and often only internally operating airline reservation systems were simply seen as devices with which to save time and labour in handling the ever increasing amount of flight reservation data. Starting in 1976, CRSs were made publicly available to members of the US travel trade with the introduction of American



Airlines' Sabre and United Airlines' Apollo (for the history of the CRSs see Global Aviation Associates, 2001, pp. 11-37).

The status of CRSs changed in post-deregulation times with passengers having a wider choice of operators, routings, fares and booking conditions at their disposal. The travel trade responded to customers' demand to receive a broader offer of available transport options by linking into the powerful CRSs owned or hosted by major carriers, and therefore serving as a repository of travel-related information. CRSs enabled agents to swiftly, and literally on a 24-hours basis, focus upon the global multiplicity of flights, fares and seat availability on a given route and other leisure bookings (see Hanlon, 1996, p. 55 and Pompl, 1998, p. 242).

On the supply side, airlines were technically empowered to feed new offers, fares or other product features into the reservation system, thus conveying the necessary product information instantly to the respective points of sales. Market transparency consequently intensified and communication errors decreased. At the same time, CRSs were given a competitive status in the market, as they served as the most important means to distribute airline and travel products.

The technical concept of a CRS comprises a host - the core-system operator - that is linked to co-hosts. Co-hosts are companies purchasing the services of a host and feeding information into the system which are then distributed. Co-hosts can thus be airlines, hotel groups, car rental firms, or others, running their own sub-systems. Clients or subscribers of CRSs are agencies making use of the network infrastructure to sell travel related products - front-office-function - and to internally process information - back-office-function - sometimes using links to back-office enterprise resource planning (ERP) software (see Gill, *Changing Channels*, 2000, p. 68). Information is constantly exchanged between host, co-hosts and subscribers in order to provide all parties linked to and using the system with the most current data.

The most significant CRSs (also called GDSs, Global Distribution Systems) today and their current holding structures are:

- Sabre (The Sabre Group Holdings, Inc.): From 1996 until April 2000, 82,2% owned by AMR Corporation, the primary owner of American Airlines, Inc., the remaining 17,8% was in public ownership (see Sabre, 2000). Since April 2000, 100% publicly owned.

- Galileo (Galileo International, Inc.): From 1997 until July 2001, owned by: public (73,2%), a subsidiary of United Airlines, Inc. (17,6%); Swissair (7,7%); and other European carriers (see Galileo, 2000). Since July 2001, 100% owned by Cendant Corp.
- Worldspan (Worldspan, L.P.): Owned by: Delta Air Lines, Inc. (40%); a subsidiary of Northwest Airlines, Inc. (34%); American Airlines, Inc. (26%) (see N/A, About Us, 2002).
- Amadeus: Owned by Air France S.A. (23,36%), Iberia (18,28%), Deutsche Lufthansa AG (18,28%), remaining 40,08% is held publicly (see N/A, Investors, 2002).

Most crucial for airline distribution, however, is not just being present in a CRS, but to have a good position on the CRS screen. In highly dense markets comprising a vast number of offers, only those airlines that are highly visible on CRS screens - i.e. being present on the first screen, or on top of the first screen - will stand a chance of selling their products (see Beyhoff et al., 1995, p. 56). Airlines owning a CRS can distort their appearance for their own benefit. There are several ways to influence an airline's appearance on a CRS. Among these system biases are: display bias, connecting point bias, database bias and architecture bias (see Global Aviation Associates, 2001, pp. 24-25 and Pompl, 1998, p. 252). The main goal of these biases is to push a competing carrier off the CRS screen. The influence on the agent's booking behaviour is further increased by CRS operators offering mandatory package deals, including the purchase of certain hard- and software components.

The concern regarding biased CRSs lead to a proposed regulation that airlines be divested of CRS ownership. However, governments abstained and decided to introduce certain codes of conduct instead, thus explicitly forbidding display bias and discriminatory and unreasonable charges. One loophole in these codes of conduct is alliance services and codesharing. The USA as well as Europe have thus decided on certain rules according to which airline products have to be presented on CRSs to protect consumers from unfair and deceptive practices. In November 1984, the original CRS rules, enforced by the CAB took effect in the USA (see Global Aviation Associates, 2001, pp. 29-31). In 1993, the European Commission established its set of rules for CRSs. These rules include codes for system vendors, general participation, information loading, processing and distribution methods, display codes, information provision and reciprocity regulations, contractual design and service fees (see The Commission of the European Communities, 1993).

Another aspect of CRSs is the huge volume of data they generate. Airlines do not just have access to their own sales data, but, provided by CRS companies, also have access to their



competitors' data, which give them a somewhat unique position as opposed to other industries. Furthermore, they gain insight into each of their distributing travel agents' sales figures, not only for their own airline, but also for competing carriers. The CRSs capture details of ticket sales, including data on carriers, travel agencies, city-pairs, and fares. These data, which can be purchased by airlines, provide carriers with the means to develop detailed information concerning all CRS-facilitated ticket sales and ticket prices, including each travel agency's ticket sales on other carriers and each carrier's CRS-related ticket sales. Preparation of meaningful market information requires the purchase of data from all major CRSs. Sabre indicated that the price of its US domestic market data is approximately USD 60,000 per month. Worldspan set its monthly price at approximately USD 17,000 (see United States Department of Transportation, 1999, p. 8). The data are unusable until they have been arranged in accordance with the purchaser's specifications, resulting in high processing costs. The European and US codes of conduct require the discrimination-free release of the same marketing data to all participating carriers (see Hanlon, 1996, p. 61). However, cost considerations - data purchasing price and processing facilities - may restrict data acquisition to only the largest carriers.

With all the mentioned advantages of CRSs, however, two inefficiencies of CRSs and GDSs are currently being examined. Price inefficiency has developed from their oligopolistic market structure, since the systems do not have an incentive to compete against each other in terms of the booking fees charged to airline clients.<sup>47</sup> The second inefficiency arises from the cost of each booking. As a result of the decreasing costs of data processing and equipment, the internal marginal costs of GDSs have been declining as well (see Global Aviation Associates, 2001, p. 41). These lower cost levels have never been passed on to the market, which gives airlines an incentive to restructure their distribution strategies and focus more on online reservation facilities. Low-cost carriers have traditionally embraced this strategy and are not usually subscribers to or co-hosts of CRSs.

#### 3.4.4.2 Online Reservation Systems

Online reservation systems are the most modern form of air transport service distribution. As technology becomes more pervasive, customers begin to use tools formerly reserved for travel professionals - the formerly proprietary network (such as a CRS) now becomes a shared

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<sup>47</sup> One large GDS company raised its fees from USD 2,1 per segment in the early 1990 to USD 3,54 in the year 2000. On average booking fees by GDS have been raised by nearly 7% per annum since 1990 (see Global Aviation Associates, 2001, p. 41 and p. 46).

infrastructure. With the widespread availability of Personal Computers (PCs) as well as Internet services and its proliferation from the early 1990s onward, an increasing number of leisure and corporate customers have been exposed to the e-commerce marketplace for air transport service. It is estimated that by 2003 online travel sales will reach USD 29 billion and thus accounts for a third of all purchases of commodities made online (see United States Department of Transportation, Statement, 2000, p. 6).

Generally, air transport service's online distribution, as sorted by the front-end provider, can be divided into the following categories.



Table 3.5: Categorisation of Online Distribution Providers

Front-End Provider	Example	Back-Office Systems	Comments
<b>Individual Airlines/Suppliers</b> <ul style="list-style-type: none"><li>• Own web sites</li><li>• Dedicated distribution web sites</li></ul>	Lufthansa's InfoFlyway www.lufthansa.com South African Airways www.flysaa.com Southwest Airlines www.southwest.com	CRSs, individual and customised internal booking systems	
<b>Group of Airlines (Multi-Carrier Online Travel Agencies)</b>	Orbitz <sup>1</sup> www.orbitz.com Opodo <sup>2</sup> www.opodo.com	CRS (e.g. Worldspan for Orbitz, Amadeus for Opodo), individual and customised internal booking systems (planned for Orbitz)	These airline consortia have repeatedly concerned competition authorities.
<b>Multilateral Airline Alliances</b>	Star Alliance www.star-alliance.com Oneworld www.oneworld.com Sykteam www.sykteam.com	CRSs, individual and customised internal booking systems	With the exception of Oneworld, no real online travel facilities, however, portals with links to online booking sites of individual member carriers.
<b>CRS Online Platform</b>	Amadeus www.amadeus.net	CRS	
<b>CRS using other Provider Names</b>	Travelocity www.travelocity.com	CRS (e.g. Sabre for Travelocity)	First comprehensive travel reservation system on the Internet, established 1996
<b>Online Travel Agencies and Travel Malls originating from brick-and-mortar travel agencies</b>	American Express www.americanexpress.com	CRS (e.g. Galileo for American Express)	
<b>Online Travel Agencies and Travel Malls, purely dot.coms, third party intermediaries</b>	Microsoft's Expedia www.expedia.com	CRS (e.g. Worldspan for Expedia)	
<b>Other Online Distribution</b> <ul style="list-style-type: none"><li>• Auction Sites</li></ul>	Bid or Buy (South Africa) www.bidorbuy.co.za ebay www.ebay.com	Internal auction inventory software	
<b>Internet Portals</b>	America Online www.aol.com Yahoo! www.yahoo.com	Agreements with CRS or usage of online agency's back-office systems	

<sup>1</sup> Orbitz is jointly owned by: Delta Air Lines, United Airlines, Northwest Airlines, Continental and American Airlines with other airlines signing as marketing partners (see US Department of Transportation, Statement, 2000, p. 3 and US Department of Transportation, Testimony, 2000). Orbitz, however, was considered to be anti-competitive and was therefore under scrutiny by the US Department of Transportation.

<sup>2</sup> Opodo is jointly owned by Aer Lingus, Air France, Alitalia, Austrian Airlines, British Airways, Finnair, Iberia, KLM and Lufthansa.

Source: own overview

Individual airlines and online travel agencies use the Internet as an information dissemination and revenue-generating channel. Usually the following basic components are offered by airlines on their sites (see Law and Leung, 2000, p. 204):

- Product information
- Product pricing
- Online ordering

Other extra benefits include:

- Fare discounts (so-called e-fares for bookings through online services only) and fare conditions
- Ticket auction facilities
- Class upgrade possibilities
- FFP links
- Seats requests
- Meals requests
- Ticket payment and delivery services

Obviously, not all airlines render the same standard of online distribution service. European and North American carriers, especially, seem to be more sophisticated in offering online distribution services than airlines from other regions (see Law and Leung, 2000). This is understandable due to the regional availability of Internet facilities, education and the travel patterns of the population (see Bonn et al., 1999). In the USA, the country with the highest Internet penetration, domestic airlines made 7-8% of their total sales online in 2000 (see Feldman, *Visualize Profits*, 2001, p. 17). While the effects on distribution from the Internet are substantial, the growth, however, is generally below expectations.

Three rewards arise from the air transport service business for consumer e-commerce, namely for sellers, intermediaries and buyers (see Berryman et al., 1998, p. 152).

Sellers (see above) can reach more customers by offering new direct sales channels for existing products. They can gather better information about clients, target them more effectively and serve them better, literally in a personalised one-to-one way (see McDonald, 2001). For the first time, sellers and buyers can communicate directly over a data-rich information channel. This allows airlines to get much closer to their web-using customers to package offers to the individual customer's needs (see N/A, *Webbed Wings*, 2001, p. 21). New product information can be updated real-time, therefore always making it up-to-date at the respective point of sale, and drastically decreasing time to market. Cost reduction, through greater process efficiency and bypassing the classic travel trade, is one of the main attractions



of the electronic marketplace. Airlines can save on information expenditure for the travel trade and for end customers. Distribution cost reductions of 75% are being estimated - Lufthansa indicated possible savings of about DEM 200 million (approximately EUR 100 million) until the year 2005 (see United States Department of Transportation, Statement, 2000, p. 8, N/A, Lufthansa will die Fluglinie an der Spitze bleiben, 2000 and Global Aviation Associates, 2001, p. 39).<sup>48</sup> CRM and account information management as well as revenue management become easier and can be integrated with the existing facilities.<sup>49</sup> The possibility of filling unsold seats with low-priced, online offers, or holding seat auctions on the Internet in order to achieve a close to 100% load factor were two of the first considerations in favour of online seat distribution (see Flint, Cyber Hope or Cyber Hype, 1996, p. 25).

Third party intermediaries, like Internet-linked CRSs, web design, ERP or CRM, also benefit from the value creation of the electronic marketplace. However, the disintermediation described above spurs a certain re-intermediation, since the vast amounts of information have to be compiled and presented in an easy-to-use way with navigational support. Some CRSs migrated to the Internet. The CRS Galileo is behind the web sites of United Airlines. Worldspan provides the search engine, or transaction engine, for 80 airline web sites. Amadeus claims to provide the search tool for 55 airline sites (see Gill, Changing Channels, 2000, p. 67). Sabre has initiated the travel web site Travelocity, which provides destination information, the ways to get to there and offerings of multiple products for the trip. Thus support of Internet distribution has developed into a main focus of the above-mentioned GDS companies.

The best reward, however, is claimed to go to the buyers. Customer demands such as transaction flexibility, service convenience, and customisation can easily be achieved, with travellers now being able to access data and compare suppliers' offers. Travellers can avoid time and space limitations by visiting one of the many web sites and completing the information and reservation tasks from home or from the office, without being restricted to travel agencies or airline sales outlets' opening hours. Online booking technology definitely enhances some of the service industry's product attributes, where most attributes are intangible.

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<sup>48</sup> A Delta Air Lines estimate pegs the cost of selling a ticket through a traditional travel agency at USD 34 compared to USD 2 when sold on the airline's website [www.delta.com](http://www.delta.com) (see McDonald, 2001, p. 11).

<sup>49</sup> The results of a survey showed that 60% of the questioned airlines rated CRM and security issues the most important business issues associated with online travel sales. 39% found that revenue management was the most significant business issue (see SITA, 2000).

The next distribution channel coming into focus for CRSs is wireless applications. The aim is to provide travel data and booking capabilities via wireless networks to telephone handsets, personal digital assistants and notebook computers. Sabre signed a deal in 2000 with UK-based mobile phone service provider Vodafone. Amadeus has partnered with Swedish mobile phone company Ericsson in order to develop hard- and software solutions to meet the new demand (see Gill, *Mobile Movers*, 2000). The launch of UMTS services (Universal Mobile Telecommunications Systems - a fast mobile data transfer standard) will see a widening of possibilities for mobile applications.

Generally, the fast development of the Internet as a marketplace for travel products reflects a frailty of the former, purely agency-based distribution system. The speed with which an electronic market develops for any product will depend on the factors of current transactions' inefficiency and on buyers' sophistication (see Berryman et al., 1998, p. 155). Customer dissatisfaction with and perceived deception by the travel trade, aggravated by poor information flows, has spurred passengers' will to individually choose and purchase the right product. Set against the background of increasing customer sophistication, enabling them to clearly define product specifications and to understand the differences between vendors' offers, the travel trade will move even quicker to electronic marketplaces.

The drawbacks of e-commerce in the travel industry have been and will be felt by many travel agencies. Airlines capped commissions paid out to travel agencies against the background of the new online distribution methods. These income constraints drove many travel agencies into bankruptcy. Further, the described new technologies are progressively rendering the traditional agent infrastructure obsolete as providers and suppliers begin to understand how to deliver information directly to their customers through multimedia, or, specifically, e-systems.

### **3.5 Summary and Implications**

Competition between incumbent carriers is fierce due to the, often, oligopolistic market structures. The situation has become increasingly rigorous through the emergence of new business models, which are aggressively targeting traditional modes of conducting air passenger transport. Highly profit-driven and cost-effective private airlines have never put more pressure on flag carriers than today, and this market feature is expected to intensify in future. Flag carriers often have higher operating costs than private airlines, may have more employees than their size can support, own larger aircraft than routes and load factors would indicate, or operate unprofitable services as mandated by government decree. In addition, the



classic flag carrier traditionally has a comparably high production depth, a feature that is a considerable burden to the airline's performance. In many cases, internal frailties result in passengers' demands not being satisfied to an acceptable extent. Private carriers without these constraints can often operate more flexibly, as they have leaner organisations and equipment structures, pass their costs savings on to the travelling public, and can potentially operate profitably and stimulate air travel. Private carriers have thus become the model-type of air passenger transport providers.

Privatising state-owned flag carriers to develop healthy airline competition is thus a goal of most of the world's national governments. In more developed economies with modern airlines and financial markets, privatisation proceeds quickly, although it may take governments some time to elaborate attractive business cases that will bring in investors. Eventually, however, virtually all the world's airlines plan to be privatised and will operate on a model of cost-effectiveness and operational efficiency, but yet potentially competing heavily with one another.

In a more developed, privatised airline environment carriers have designed tools which help them to retain passengers and push their products through their distribution channels. While FFPs, CLPs and ALPs require investments for their establishment, they seem to compliment best the incumbents' business models of offering comprehensive service in tightly-knit networks. Comprehensive networks are thus the main condition for the establishment of those tools, but at the same time they require constant enlargement, also virtually, through partnerships, in particular to compete with other airline networks. Low-cost carrier business models do not make use of these tools and play their cards purely in the inexpensive fare arena.

Service and value chain product providers will also be exposed to a new form of competition on a horizontal level and certainly vis-à-vis their airline clients. Their protection from competition by means of regulation will gradually fade and market forces will start to induce strategic re-orientation and consolidation. Airlines will more and more divest their in-house value creation and use global markets to source supporting air transport services.

The ecological debate has surrounded air transportation for a long time and this will continue in future. Paired with the cost of transport and timing considerations, there is a driving force to promote substitutes to air transportation. In the proximate future airlines have to internalise these challenges. The proactive development of intermodal schemes to handle competitive

threats will become a main feature of transportation in highly populated regions around the world.

Network development will be another focus in the years to come. Numerous elements influence airline network development. These elements include government regulations, aircraft capabilities and economics, passenger requirements, competition from other carriers and other modes of transport, horizontal collaborations, and the maturity of an airline's existing network. Over time, network development strategies have increasingly focused on adding new non-stop services, boosting frequencies on existing routes; competing with other airlines on their routes and building complementary gateway hub networks. Passengers will avoid itineraries that require several connections and numerous segments to complete a journey. Where possible, airlines will provide passengers with time efficient point-to-point services on highly frequented routes, also in conjunction with terrestrial transportation. When this is not economically feasible, passengers will prefer carriers that move them over a single hub with one-stop connecting services to their final destination.

Itineraries' flexibility regarding regularity of services plays an important part in airline rivalry. Hence, another reason for offering more frequency is their role as a primary form of non-price competition, in particular between incumbent carriers. Whether fares are fixed by regulation, or are forced to similar competitive levels under deregulation, in the long run they rarely provide a vehicle for airlines to differentiate themselves in the marketplace. In the battle for market share and long-term profitability, incumbent competitors almost always match fare reductions. With prices equated, the battle for market share takes place in the service arena - also with a downward orientation - with frequency of operation being a deciding competitive factor. A fresh impetus for price competition, however, has been given by the emergence of new entrants in the form of low-cost operators. Their business models, in particular within densely populated regions, will proliferate in future and pose significant competitive threats to established carriers.

As all airline types around the world, whether low-cost operators or incumbent flag carriers, work to add city pairs and frequencies, build hubs, and effectively compete in global markets, the infrastructure required to handle this growth will need to adapt. History shows that infrastructure supply and air travel demand in specific markets are often not synchronised. There is no one solution to the congestion problem - each region has its own unique set of issues. Some remedies revolve around making the existing infrastructure more productive. Examples include more banks of flights at hubs, overflying hubs, more flights at un-congested



times of day, greater use of existing secondary airports, and use of complementary short-to medium-haul rail service. Strategies that ease congestion often also support airlines' network development strategies. Secondary hubs are established to better serve customers, reducing congestion at primary airports, but equally supporting low-cost models. Rail connections are being integrated with common ticketing and baggage systems. Airports naturally play a very important, central role in providing infrastructure extensions. Their business models will need to change as they become multi-modal traffic hubs and have to meet the specific demands of the entirety of their group of users. Keeping infrastructure growing in tandem with travel growth requires the combined leadership of governments, airports, citizen groups, airlines, and other industry participants.

The distribution side of air travel services heralds revolutionary potential, and will increasingly develop into an electronic marketplace. While the optimistic expectations, in particular regarding the strength of Internet distribution, are not yet being met, airlines will have to show more endurance in reaping benefits from their electronic sales efforts. It is thereby not enough to merely focus on direct passenger contact within CRM strategies while neglecting the travel trade. Trade intermediaries will be equally affected by new distribution methods, but will remain a significant part of air transport service distribution. CRSs will additionally be affected by new distribution methods and will have to come up with strategies to prevent airlines from moving completely into Internet-based distribution.

Horizontal airline partnerships are currently and will remain a vehicle for supporting the development trends mentioned above. Finance and investment requirements, operational and commercial prerequisites as well as the ubiquitous complexity associated with globalisation seem to be best met by interairline collaboration. They can accommodate demands for further globalisation and increased competitiveness, while at the same time allowing carriers to do so without taking on heavy investments and risky strategies. The trend of rather loose forms of partnerships will persist as long as the regulatory environment does not allow for a concentration of the airline industry. Despite being unbound in nature, these partnerships have to exploit the potential of collaboration to the highest degree in order to face competition. More refined approaches to establish horizontal airline collaborations as well as managerial expertise to manage such partnerships will thus be required in the near future.

## **4 Airline Collaboration as a Competitive Tool – Nature, Drivers and Forms**

### **4.1 Introduction**

Airline collaboration has become the definition and driver for an entire evolutionary phase of air transport development (see 2.3.2 and 2.3.3) and there is no doubt that this tendency will abide for some time. The reasons for this trend are closely linked to the emergence of deregulated and liberalised markets and the rise of new competitive forces, both on the supply and the demand side of the air transport industry.

The following paragraphs briefly and generally describe intercompany collaboration, thereafter focussing on the various forms of joint business activities between scheduled passenger carriers. The delineation of specific forms of interairline collaboration lays the foundation for the development and understanding of a managerial model to detect and enhance the beneficial effects of partnership activities.

### **4.2 Company Collaboration - Key Pointers**

Company collaboration enjoyed extensive scholarly attention in the 1980s and 1990s (see research and studies by Kogut, 1988, 1989, Hamel et al., 1989, Gulati et al., 1994, Leibold and Slabbert, 1994, Bleeke and Ernst, 1995, Moss Kanter, 1994, 1995, Gomes-Casseres, 1994, 1996, 1998, Barringer and Harrison, 2000 and subsequent references). The research scope of extant literature on collaboration is both disciplinary and procedurally, highly diverse. It covers the entire range of partnership rationale, collaboration formation, value creation, partnership management, boundaries and interfaces of interfirm linkages as well as sources of difficulty pertaining to partnership dissolution (for an overview, see Spekman et al., 1998). While there certainly are gaps in interfirm partnership research, the following section, however, refrains from comprehensively and generally scrutinising collaborative action between firms. The aim is to rather introduce and underscore selected key issues regarding partnership theory and practise that are applicable in the international airline partnership scene.



### 4.2.1 Definition of Forms of Company Interrelationships

Collaboration is a generic term used for any type of economic partnership between two or more firms (interfirm) or organisations and institutions (superfirm).<sup>50</sup> A collaboration is commonly defined as any voluntarily initiated co-operative agreement between companies that involves exchange, sharing, or co-development, and it can include contributions by partners of capital, technology, or firm-specific assets (see Gulati and Singh, 1998, p. 781). The goal of collaborative arrangements is to enhance the strategic, competitive position of each participant beyond what a particular organisation can achieve individually - yet ultimately to achieve a collaborative advantage (see Lei and Slocum, 1992, p. 86, Moss Kanter, 1994, p. 96, Spekman et al., 1998, pp. 748-749).

A detailed list of reasons that have been advanced for entering a collaborative agreement can be extensive (see e.g. Varadarajan and Cunningham, 1995, pp. 284-286). However, a broad distinction between learning and business alliances can be observed. Learning alliances describe collaborative agreements whereby partners hope to learn, acquire and internalise from each other technologies, products, skills and knowledge (see Kogut, 1988, Hamel, 1991). Business alliances maximise the utilisation of complementary assets by each partner contributing a distinctive capability in a particular value-adding activity (see Hamel, 1991, Lei and Slocum, 1992, pp. 81-82, Koza and Lewin, 1998, p. 256, and Harrison et al., 2001). More detailed reasons would fall under this taxonomy, e.g. collaborative agreements to enhance market reach and marketing position, joint size effects, time-to-market advantages, or the circumvention of national trade and investment regulation (see Devlin and Bleackley, 1988, pp. 19, Backhaus and Meyer, 1993, p. 331 and Varadarajan and Cunningham, 1995, pp. 284-286).

The bandwidth of collaborative possibilities as part of the aforementioned definition reaches from occasional exchange of information to a cessation of economic and legal independence of the firms concerned. Collaboration thus covers the entire range from market-oriented (free market transaction) to hierarchy-oriented (total internalisation) co-operation (see Jäckel, 1991, p. 23, Bronder and Pritzl, *Leitfaden für strategische Allianzen*, 1992, p. 45 and for an intensive discussion and synopsis, see Sydow, 1992, pp. 61-74). Collaborative agreements are

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<sup>50</sup> Superfirm collaborations are relationships between a firm and organisations outside the immediate value chain of an industry, such as trade associations, government agencies, financial institutions, universities and unions.

also not just confined to conventional two-company partnerships. It is common to link several individual firms, or already existing groups, to networks (see Gomes-Casseres, 1994, p. 62).

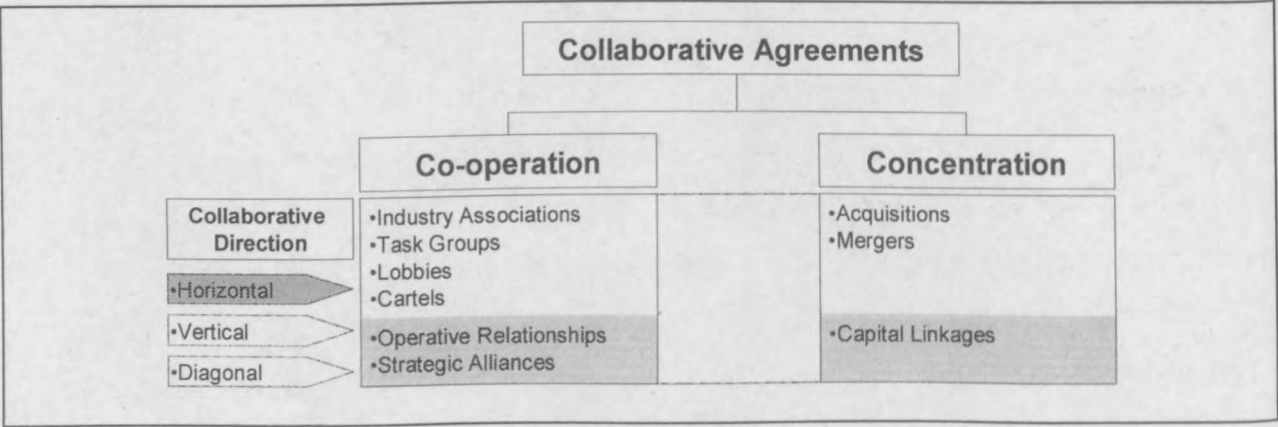
4.2.2 Taxonomy of Company Interrelationships

Literature on interfirm partnerships is deplete with many systemising models that seek to address the problem of the often unclear and inconsequent terminological usage for partnerships of different types (see Devlin and Bleackley, 1988, Kogut, 1988, Lei and Slocum, 1992, Newman and Chaharbaghi, 1996, Spekman et al., 1998). To allow for a standardised usage, the following paragraphs introduce a taxonomy of the most common partnership activities applicable to the airline industry.

4.2.2.1 A Classification of Collaborative Agreements

Many models that systemise interfirm partnership activities have been developed from the perspective of a particular industry branch, or are customised for a special type of company linkage (see Lewis, 1990, pp. 91-202, Rotering, 1992, pp. 5-19, Klanke, 1995, pp. 12-24). While those models certainly enrich the understanding of how firms collaborate, they are often not easily transferable to other industries, or other types of firm collaboration. The following model was chosen for the purposes of this dissertation, as it promises to be best applicable to the current and future forms of interairline partnership agreements, and as, within its classification, it allows the description of particular variants of collaborative activities. The figure below illustrates different basic types of collaborative agreements, whereby the highlighted forms are of prime interest for the following discussion.

Figure 4.1: Collaborative Agreements



Source: Pompl, 1998, p. 102 and own supplements

Informal relationships such as social and professional networking are not part of the definition of collaborative agreements. Also excluded from the systematisation above are market



relationships that only require ad-hoc co-ordination and no further preventive and in-depth organisation of the relationship (see Röbl, 1993, p. 47).

The direction of co-operation describes how collaborative activities are positioned with regards to the individual company's value chain (see Bronder, 1992, p. 145). A general grouping into horizontal, vertical and diagonal collaborative structures is practicable and widely accepted.

- Horizontal co-operation describes joint activities of companies on the same production or trade level, i.e. with a similar or same value chain orientation (for a detailed discussion on horizontal co-operation, see Lutz, 1993, pp. 50-52). Alternatively, horizontal partnerships are labelled confederate alliances as they bring direct competitors together (see Dollinger et al., 1997, p. 130). Horizontally oriented alliances typically strive to fuse similar, if not the same, capabilities in the production chain. This study focuses on collaborative agreements between airlines that have a horizontal orientation.
- Vertical co-operation defines economic partnerships between organisations from preceding or succeeding production or trade levels, i.e. with suppliers, distributors or buyers. In this case, the contribution of the partners is complementary, not similar. Direct contact between non-competing firms, which includes vertical collaboration, is also referred to as conjugate alliances (see Dollinger et al., 1997, p. 130).
- Diagonal co-operation defines collaboration between organisations from different industries with generally entirely different value chain orientations. In this case, a linkup of the value chain of the partnering firms is envisaged (see Bronder and Pritzl, 1992, p. 32).

Co-operation, or collaboration in the narrower sense, generally describes partnership agreements whereby the partaking companies maintain their distinct economic identity and independence (see Jäckel, 1991, pp. 24-25 and for a discussion of corporate independence, see Klanke, 1995, pp. 14-19).

A classification into strategic alliances and operative relationships is primarily prompted by a temporal orientation. Operative relationships usually arise with the necessity to procure production and other input factors, as well as distribution associates from other companies, which add to the value chain. They can be horizontally or vertically focused. The prime constitutive characteristic of operative agreements is, however, that they are rather short- to

medium-term oriented, are relatively noncommittal and require less organisational and managerial involvement (see Lorange and Roos, 1991, pp. 61-62).

Strategic alliances are characterised by long-term goals which usually incorporate the promotion of the current competitive advantage and a strengthening of future competitive positions (see Sydow, 1992, p. 63 and Töpfer, 1992, p. 176). In alliances between two firms, these competitive benefits are either common, when they accrue to both firms, or are private, when they accrue to one or the other (see Khanna, 1998, p. 341). It is obvious that common benefits are to be envisaged, since they are more likely to represent the basis for sustainable and lasting partnership success. These common, corporate benefit goals usually require planning, a higher degree of formalisation, capital investment (internally) as well as resource deployment and thus the involvement of a dedicated co-operation authority. However, strategic alliances usually incorporate partial partnerships, i.e. they are focused on collaboration of only certain business units or selected parts of a company's value chain (see Backhaus and Plinke, 1990, p. 21, Lorange and Roos, 1991, p. 65).<sup>51</sup> It is seen as an advantage that only particular parts of a firm's culture and functions need to be meshed in order to work together (see Lewis, 1990, p. 18). This gives strategic alliances a predestined risk limitation, as the entire value chain is not covered and the company is thus operationally less sensitive to failure of the partnership.

Strategic alliances are strongly characterised by the intra-alliance relationship, which is influenced by the mixture of co-operation and competition between the companies. This applies in particular to horizontal partnerships as they, per definition, bring potential or actual competitors together. Inherent to this situation is the possibility of one company being disarmed, and/or deskilled by a partnering firm, or that one of the partners is not in the alliance for the long haul (see Hamel et al., 1989, p. 134, Ohmae, 1990, p. 19, Lei and Slocum, 1992, p. 81, Netzer, 1999, p. 17). These competitive factors, which initially motivate the venture, can only be redressed imperfectly and persist as sources of future instability. Collaborative incentives can furthermore be offset by industry structural conditions that, in the case of airlines, may reside in ownership clauses, or other regulative and political restrictions which possibly can promote instability and rivalry among partners (see Kogut, 1989, pp. 183-184).

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<sup>51</sup> Backhaus and Piltz, 1990, p. 2 define strategic alliances exclusively for collaboration between actual or potential competitors and thus exclude vertical or diagonal collaboration.



Instability and rivalry can ultimately lead to the termination of the partnership or one partner taking the lead, and transferring the co-operational agreement into a level of concentration. In addition, certain types of alliances seem to be more prone to early failure than others. In a significant number of cases, strategic alliances are terminated due to one partner being acquired by its ally (see Bleeke and Ernst, 1991, p. 133, Bleeke and Ernst, 1994). This is why depth of integration has become an important factor in building trust and stabilising a partnership (for a discussion of partnership trust, see Koza and Lewin, 1998, pp. 258-259, Birnberg, 1998, pp. 422-423 and 5.6.1). Partnership intensity in strategic alliances is determined by the legal depth of the co-operation, the reach, or scope of the strategic alliance, input resources and the time frame of the co-operation. A thorough discussion of this issue follows further below (see chapter 6).

Within the definition of strategic alliances a wide range of degrees of institutionalisation occurs concerning the legal strength of co-operation - from rather loose agreements to cross equity exchange (see Bronder and Pritzl, 1992, p. 34 and Hammes, 1994, p. 44). Capital linkages are generally not in line with the classic definition of co-operation as they portray company concentration. It is, however, widely agreed that the existence of minority capital investments does not contradict the definition of strategic alliances (see Hammes, 1994, p. 23 and Lutz, 1993, p. 45).

The reach or scope of co-operation defines value chain activities included in the partnership.<sup>52</sup> However, per definition strategic alliances cannot embody comprehensive value chain collaborations. Partnership intensity is further dependant on type and quantity of input resources and the depth of collaboration in the respective collaborative area. Collaboration is potentially less close when information alone is exchanged, as opposed to additional hardware, personnel and capital exchange. Despite the general agreement that strategic alliances have a long-term orientation, the planned duration of a partnership can also be an indication of the intensity of the collaboration. Some strategic alliances are based on gradual agreements which increase in scope and, thus, intensity over the contractual period (see Lutz, 1993, pp. 54-55). However, the time frame of a collaborative agreement should also be made dependant on the value chain orientation and, consequently, the scope of the partnership.

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<sup>52</sup> An example of the narrow and broad scope of an alliance is given in Zinn and Parasuraman, 1997, p. 140 and further below in connection with partnership intensity.

Know-how advantages can usually be realised quicker than cost-effectiveness in production (see Bronder and Pritzl, 1992, p. 34).

Concentration is the other main area of collaboration. An important constitutive characteristic feature of concentration is the existence of substantial capital linkages between firms. Capital linkages can include the incorporation, or acquisition, of an independent firm and equity stakes in a partnering firm. Mergers and acquisitions are not discussed in any detail in this study. However, certain forms of capital linkages are of interest, in particular for an outlook on the future of international air transportation.

#### 4.2.2.2 Strategic Networks

Strategic networks generally describe wider forms of company collaboration and are mostly understood as strategic alliances with multiple partners. Network theories have received detailed attention by scholars, who have focused on organisation-scientific, sociological and business managerial aspects, as well as strategic issues (see Sydow, 1992, Gomes-Casseres, 1994, Grandori and Soda, 1995, Grandori, 1997, Gulati, 1998). What becomes apparent, however, are the breadth of research from various perspectives, and the multitude of definitions of the network concept. The following paragraph describes the network terminology in line with the focus of this research study and sets a foundation for a more detailed discussion of the concept in the airline industry.

“Strategic networks are long-term, purposeful arrangements among distinct but related for-profit organisations that allow for those firms in them to gain or sustain competitive advantage vis-à-vis their competitors outside the network” (Jarillo, 1988, p. 32).

A strategic network in this regard is the realisation of competitive advantages through a polycentric, but individually or commonly, and strategically managed form of organisation. Such an organisation form is characterised by a complex reciprocal and co-operative, rather than competitive, relatively stable relationship between a finite number of legally independent and economically interdependent entities (see Sydow, 1992, p. 79 and p. 82). Interdependencies arise as networks operate on a logic of exchange, which is a core feature in network structures and irrespective of the collaborative direction<sup>53</sup> (see Sydow and Windeler, 1998, p. 267). Networks delineate clusters of organisations that work together more intensely

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<sup>53</sup> However, Backhaus and Meyer, 1993 describe networks as arrangements of only vertical and diagonal orientation.



than other groupings within the industry (see Ebers and Jarillo, 1997/98, p. 3). The position of each firm in the network is directly dependent on its relationship with counterparts and indirectly dependent upon the counterparts' relationships to others in the network.

With the progressive emergence of networks, a new form of overall competition has developed globally: group versus group (see Gomes-Casseres, 1994, p. 62). Firms exposed to this competitive environment, as parts of groups of allies, find themselves in the situation of collective competition (see Gomes-Casseres, 1996, pp. 6-7). The idea of collective competition can be applied to how allied firms in rival groups organise themselves to exploit specific goals. Collective competition often appears as a variant of oligopoly, i.e. representing competition between a few powerful constellations and firms.

Network companies are usually legally allied on a longer-term basis. They interact on a personnel-organisational level (job rotation, mutual representation in supervisory boards, etc.), on a technical-organisational level (i.e. inter-organisational IT, input factor exchange), and on a managerial level (joint management structures and tools). Not all network companies have to be directly linked to all others within the network, there must, however, be an overarching collaborative agreement to which all network members are party (see Gomes-Casseres, 1994, p. 65). Capital linkages might occur, but they are not a constitutional necessity for networks. An aspect that exclusively applies to networks is that their action is intentional. In comparison to other co-operations, a strategic network is more likely to incorporate a set of explicitly formulated goals, a formal structure with a fixed allocation of tasks and, very importantly, an individual identity (see Sydow, 1992, p. 82).

A cardinal objective of firms in networks is to possess the most optimal network position in order to create a strategic competitive advantage. Positions within a network are therefore interconnected and capture the complexity and multiplicity of the business relationships existing between firms. Network relationships in mature industries are usually described as being stable, and positions are embedded within the network. Network stability, either relative or latent, requires a degree of social embeddedness, which elucidates loyalty and trust (see Gulati, 1998, pp. 295-296). In fast changing and volatile industries, however, network structures are less stable, which leads to strains on the relationships and thus possible conflict and termination. It is again a firm's position within a network that spells out its opportunities and limitations regarding establishing, maintaining and terminating business relationships. Being in control of a unique resource required by other firms in the network will strengthen

the existing relationship and initiate new relationships with firms in need of this resource (see Low, 1997, p. 191).

As far as partnership benefits are concerned: with a higher number of firms involved in networks, competitive advantage through co-specialisation is a key source of profit. Co-specialisation, by which each network member carves out new profitable market-niches, leverages the flexibility required to compete in a large number of markets. The network-wide possibility of technology and know-how transfer and spillover, as well as regionally unique skills and attitudes can enhance the network's abilities to establish ties with a larger number of organisations. While these motives, among others, identify important driving forces that lead to the construction of networks, they cannot sufficiently explain why networks are formed. These individual motives are highly dependent on the specific industry, including the players, the activities and resources, the regional or global structure, the existing web of relationships and the role of power among their members (see Ebers and Jarillo, 1997/98, pp. 4-5 and pp. 17-18).

The establishment of a network usually requires the existence of at least one hub firm that is in charge of the network's strategy, the value generation process and presenting the environment with a harmonious and consistent appearance (see Jarillo, 1988, p. 32). Strategic management is usually in the hands of the firm operating in a specific market and therefore the hub firm(s) is or are responsible for operative issues as well as the forms and content of interfirm relationships. Despite the polycentric character of the network, the focal firm is responsible for a meta-co-ordination of economical activities (see Sydow, 1992, p. 81). A strategic, robust centre seems to be one of the key prerequisites for a successful network. Strategic centres play a critical role as the creators of value which incorporates, among other aspects, network-wide capacity building, and guidance with regard to a competitive strategy between the members of the network internally and externally towards the environment (see Lorenzoni and Baden-Fuller, 1995, pp. 146-147). A hub firm's prime task is to orchestrate responses so that the whole system capitalises on opportunities and realises both internal and external development. This context is further illustrated in connection with global airline networks (see 4.4.2.3).



### 4.3 An Overview of Airline Partnerships

Following the basic introductory classification of company collaboration, the coming paragraphs discuss the history of airline partnerships and scrutinise motivations for entering horizontal airline co-operations.

#### 4.3.1 History of Airline Partnerships

Ever since the establishment of public air transport, commercial airlines have co-operated on various directional levels and in a wide range of functions. Whether the joint business focused on operational, commercial or technical issues, training and personnel, or the standardisation of procedures, carriers spun a web of co-operation amongst one another for operative reasons. These forms of co-operation have been complemented by air transport industry associations permitting superfirm collaboration (e.g., IATA, ICAO, AEA, etc.) to be in charge of the lobbying for specific interests within national, regional and global political and regulatory structures.

Historically, international aviation industry alliances can be traced back as far as 1945 when IATA was primarily established to co-ordinate international air fares. The bilateral structure of agreements that emerged following the 1944 Chicago Convention to initiate free international aviation markets, included traffic rights (freedoms), fare regulation, routing arrangements, schedule co-ordination, carrier designation and often embraced revenue pooling - a distinct form of airline collaboration. The primary aim of the immediate post-war structures was to protect non-US carriers at a time when, as a result of the Second World War, the USA had built up a dominant fleet of formerly military aircraft that could be transferred to commercial uses. Subsequently, IATA was often used to protect economically inefficient state-owned carriers, or groups of flag carriers from the rigors of market competition by providing a stage for collaboration (see Button, 1997, p. 3).

The international legacy of air service agreements, both initiated and partly controlled by IATA, has likewise called for co-operational measures, in order to reach understandings in bilateral negotiations regarding tariffs, routes, designation, frequencies and capacities. Deregulation and liberalisation obviously made these competition-restraining air service agreements redundant for some integration regions, they do, however, still widely occur, propagating airline partnerships. While regulation has instigated airline collaboration in order to circumvent competitive restrictions, deregulation has opened up new ways for airlines to jointly compete. One of the most striking results of deregulation was the impetus it gave to

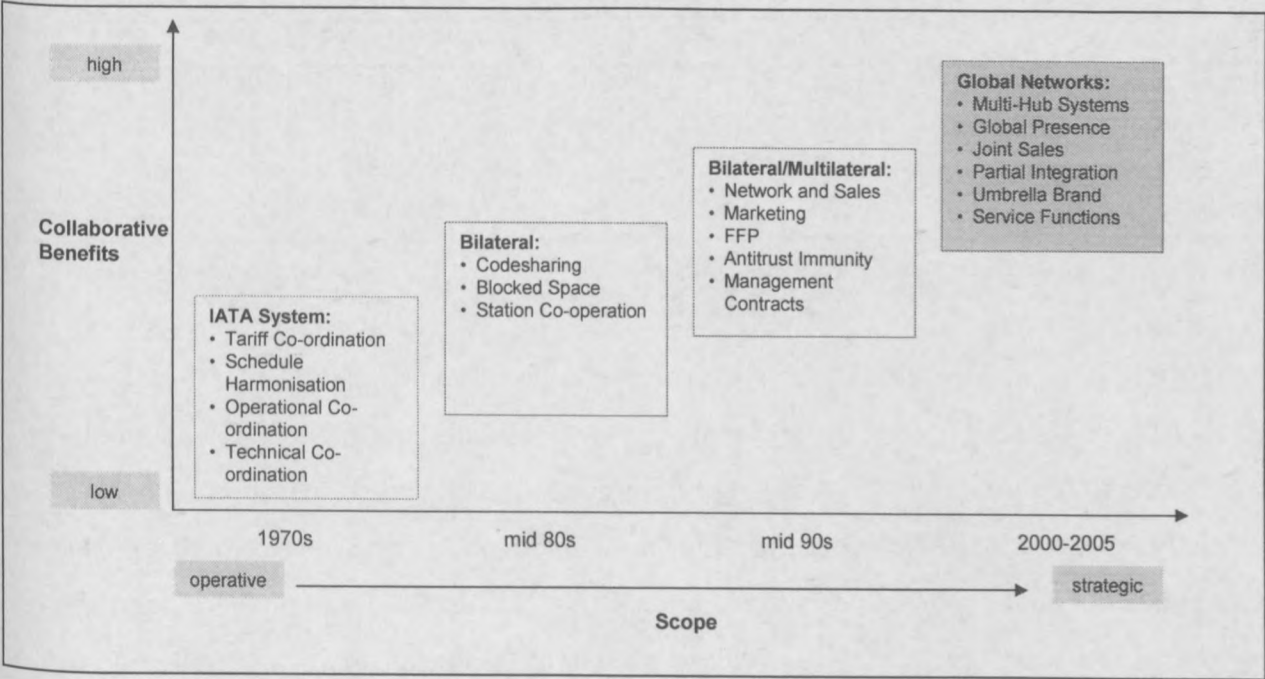
the level of activity in airline mergers, acquisitions and, more intense yet further market-oriented, collaboration within national boundaries, especially in Europe and the USA.

However, and as discussed earlier, air transport markets are not yet fully liberalised and deregulated. Nations generally require airlines based within their borders to be majority-owned and controlled by citizens of their countries. As a result, international mergers and acquisitions, which would seem to make economic sense for airlines, are effectively prohibited. But carriers are finding ways around these limitations. They are increasingly entering into alliances, or collaborative agreements with foreign partners, similar to those that have long been a fixture in manufacturing and, more recently, in the telecommunication and energy industries. Covering a broad range of activities but stopping short of full-fledged mergers, the pacts typically call for airline partners to share routes, jointly set fares and schedules, integrate marketing and incentive programmes and combine aircraft maintenance, catering, reservations, and a host of other operational matters (see Miller, 1997, p. 64).

The late 1980s and early 1990s saw the growth of new forms of international alliances that embraced somewhat different characteristics and served miscellaneous purposes. They have been less institutionalised in that they have been, in most cases, formed by privately-owned commercial airlines outside of any governmental or inter-governmental agency initiatives (see Button, 1997, p. 4). Many co-operation agreements struck between carriers involve no or little investment in equity. Some co-operations are on a bilateral basis, others on a multilateral one. Areas covered by airline partnerships are diverse. The following figure puts certain types into a historical perspective and categorises partnerships according to scope and benefits.



Figure 4.2: Historical Development of Scope and Benefits in Airline Partnerships



Source: own overview

The statutory and regulatory environment after the US deregulation, starting in 1978, and subsequently in other liberalised markets, has allowed for a discrete increase in the maximum scope of airline partnerships. The opportunity to engage in more extensive partnerships also resulted in potentially more gainful collaborations. While the beginning of partnership formation was marked by externally organised collaboration through IATA systems, the development followed a pattern of incorporating more allies into what recently became multilateral airlines networks. Generally, the figure above does not imply that all current partnerships necessarily contain the most eminent pattern with regards to collaborative benefits and scope. All the mentioned forms of partnership still apply currently, however, the width and depth of co-operation have developed gradually over the last three decades, which has spurred the proliferation of more intense horizontal partnerships.

Not only have alliances proliferated in type over the past decade, they have also boomed in number. An annual survey attempts to track alliances involving major carriers and to report changes in their main features. The following table shows the quantitative trend of alliance forming in the global airline industry.

Table 4.1: Airline Alliance Summary 1994-2000

	1994	1995	1996	1997	1998	1999	2000
Number of Alliances	280	324	390	363	502	513	579
With Equity	58	58	62	54	56	53	52
New Alliances	-	50	71	72	121	26	40
Number of Airlines	136	153	159	177	196	204	220

Source: Wood and Gallacher, 1998, p. 43, Gallacher, Partners for now, 1997, p. 26, O'Toole, The major Airline Alliance Groupings, 1999, p. 36, O'Toole and Walker, 2000, p. 46

The growth in overall partnership activities is perceptible. Equity partnerships have been rather stable in absolute figures, but increasingly play a less substantial role in relation to the total numbers. The year 1997/1998 saw a peak in newly constituted partnerships, which can be mainly attributed to the emergence of some of the main global multilateral groupings. The exact number of airline alliances existing at present (2002) is unclear, not only because of the dynamic nature of the arrangements, but because the term “airline alliance” is generic and has no precise definition. Empirical evaluation thus becomes increasingly difficult. Evidence strongly supports the contention that the last decade especially witnessed a mushrooming growth in airline partnerships, with slower growth rates expected in the years to come.

4.3.2 Goals and Motivations for Airline Co-Operations

Each collaborating partner’s comprehension of a partnership’s pay-off is crucial for understanding the incentives to co-operate and recognising the ways each can unilaterally influence the alliance’s outcome (see Gulati, 1998, p. 304). This cognition mirrors the original motivation for an airline to enter into horizontal collaborations.

In the broadest terms, any form of collaborative arrangement can achieve the following more or less overlapping objectives, which in turn motivate co-operational company action (see Contractor and Lorange, 1988, pp. 9-15). These are:

- Risk reduction:
  - Dispersion and/or reduction of fixed costs
  - Lower total capital investment
  - Faster and safer market entry and payback
- Economies of scale and/or rationalisation:
  - Lower average costs through larger volumes
  - Lower average costs by using allied partners’ comparative advantages
- Complimentary technologies and patents



- Co-opting or blocking competition:
  - Defensive behaviour to reduce competition
  - Offensive behaviour to increase costs and/or lower market shares of other market players
- Overcoming government-mandated trade or investment barriers:
  - Circumventing regulative barriers
- Facilitating initial international expansion of inexperienced firms

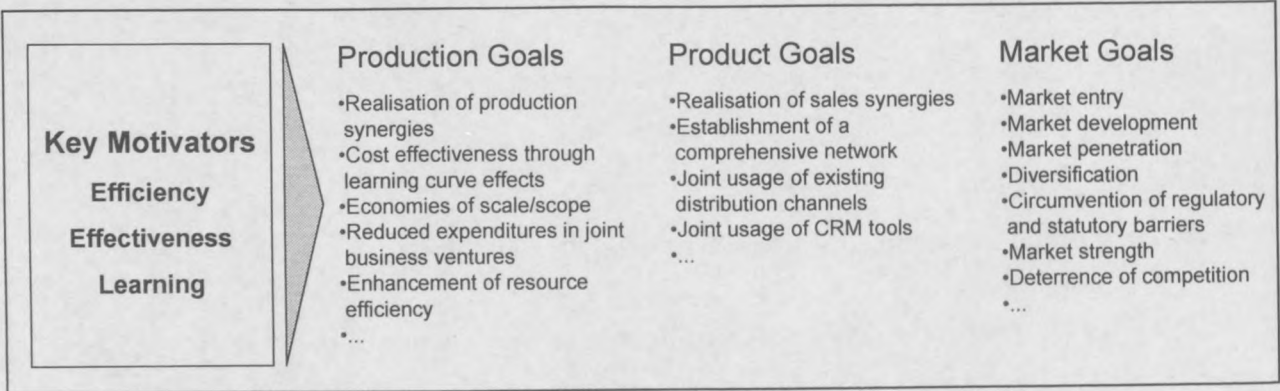
In summary, the above-mentioned motivations for airline partnerships can be categorised into:

- Efficiency,
- Effectiveness and
- Learning motivators.

Efficiency motivators primarily entail the exploitation of cost-reduction opportunities in horizontal alliances between companies having complementary and/or overlapping expertise (see Harrison et al., 2001). Effectiveness motivators cover market-based motivations to enhance a company's market position. In an increasingly competitive environment, characterised by highly fragmented market segments and a constant strive to leverage one's core competence, prospective alliance partners seek to expand their market share and/or size (see Jarillo, 1988, Vander Kraats, 2000, p. 56). Efficiency and effectiveness motivators are mainly part of the above-described business alliances and are thus closely related to market-induced partnership considerations. Market-driven approaches to alliance formation are based on customer-usage complementarity, and thus merge both concepts (see Dev et al., 1996, p. 12 and Bronder, 1992, pp. 92-122). Learning in the sense of know-how and best practice transfer and the management of knowledge in learning inter-organisational structures has also become an increasingly important factor in passenger carrier alliances (for an overview, see Inkpen, 1998). An alliance offers an attractive opportunity to gain access to skills that would not have been acquired had the alliance not been formed (for learning alliances, see Khanna et al., 1998). In airline partnerships, all three motivators are usually addressed simultaneously.

With the above generally describing motivators to collaborate, figure 4.3 broadly summarises some of the main goals of interairline collaboration in production, product and market categories.

Figure 4.3: Motivators and Goals of Interairline Partnerships



Source: Schmidt, 1993, p. 40 and own supplements

It is mainly agreed that within the above-mentioned goals and motivators for interairline collaboration, the main quantifiable effects are to be found in cost savings and revenue generation. In addition, the circumvention of regulatory constraints is another key factor motivating airlines to collaborate.

4.3.2.1 Cost Considerations along Value Chain Activities

Continuous and long-term unit cost reduction is a key necessity for the financial and overall success of airlines (see Doganis, 2001, p. 14). Decreasing yields, a shift in passenger composition based on changing demands, and the need to adjust to cyclical developments, especially since September 2001, have driven concentration on disciplined expenditure policies. Cost reduction considerations thus play an important role in a carrier’s decision to enter a partnership with another single carrier, or a group of carriers (also see discussion on cost degression through corporate partnerships Lutz, 1993, p. 30 and Rotering, 1993, pp. 33-38).

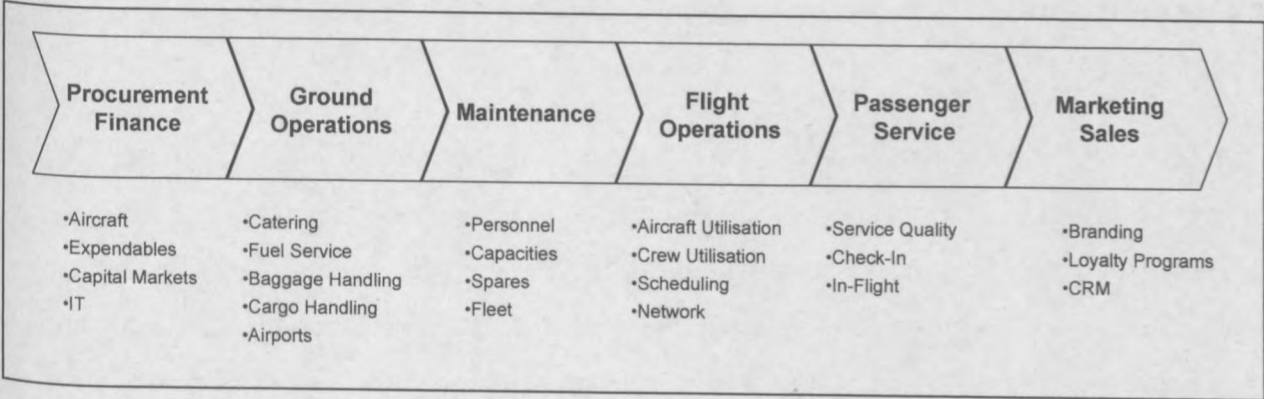
The one rationale behind airline alliances - to save costs - appears increasingly important, given the near-term expectations of slower revenue growth in the coming years and the trend towards decreasing yields. It is estimated that the overall cost saving potential, as a percentage of the total cost due to alliance activities, can range from 1,9% to 11% depending on the costs savings areas and the depth of integration (see Howarth and Kirsebom, 2000, p. 38). Cost reduction opportunities, however, take some time to develop - typically 2 to 4 years, depending on the complexity of the partnership organisation (see Howarth and Kirsebom, 2000, p. 32). Other authors estimate even longer periods of up between 5 to 6 years for an alliance to start reaping its maximum benefits (see Tarry, *Playing for Profit*, 1999, p. 91).



The following sections (4.3.2.1.1 to 4.3.2.1.6) scrutinise possible cost-effectiveness from partnership action, specifically focusing on benefits induced by economies of scale, density and scope using the structure of the primary activity stages of an airline’s value chain. Secondary value chain activities, thus management functions, are additionally elucidated concerning their contribution to partnership benefits.

The figure 4.4 illustrates a typical airline value chain, which serves as a guiding premise for the following paragraphs.

Figure 4.4: Passenger Airline Value Chain



Source: Diegruber, 1991, p. 241 and own supplements

4.3.2.1.1 Procurement and Finance

Procurement and finance is the first activity stage in an airline’s value chain, but nonetheless a perpetual function. Cost-effective procurement of input factors, such as technical equipment, fuel and consumables, passenger service products and personnel-related expendables, has become a vital necessity and is a focus of cost reduction strategies (see Doganis, 2001, pp. 14-15). Pooling procurement over the boundaries of a single carrier unearths savings potential, which has made it a core motivator to enter into collaborative agreements.

Scale effects regarding fixed procurement costs are one rationale behind cost savings expectations in joint purchasing. These fixed procurement costs need to be spent for quotations, offer comparisons, quality control and administrative processes. Variable and volume-oriented expenditure effectiveness in procurement is realised through high number bargaining vis-à-vis suppliers. Moreover, joint procurement among partners, also by reaching a critical demand-mass, merely increases the purchasing power pertaining to suppliers, which further enhances cost savings. Suppliers, in turn, can pass on the benefits from their

distinctive scale effects to the purchasing carrier. Star Alliance<sup>54</sup> members, e.g., purchase goods and services for about USD 15 billion per annum. Joint purchasing could reduce prices paid by 5 to 7% and, consequently, cut the bill by up to USD 1 billion a year (see Doganis, 2001, p. 78).

Aircraft purchase or lease agreements, in particular, are potentially positively influenced by partnership action. If alliance airlines agree on fleet commonality, major savings can be realised. The same applies to high volume agreements with lessors, irrespective of equipment or manufacturer commonality. In addition to the savings in the actual purchasing phase, there are almost automatically savings on the maintenance side, which are scrutinised below (see 4.3.2.1.3).

IT costs are an important single area of cost savings, both in terms of processing costs and, more significantly, development costs. Co-ordination between alliance partners to reduce development costs and investments when major systems become due for upgrades or replacements, is a crucial cost savings area. The cost side, but also operational efficiency are the reasons why IT integration is argued to be a prerequisite for beneficial airline partnerships (see de Pommès, 1998, p. 27). In a survey, 49% of carriers which were somehow engaged in collaborative agreements with other carriers, shared IT systems (see O'Toole, IT Trends Survey 2001, 2001, p. 58). Common IT platforms and core systems, or common outsourced IT systems (e.g. through Application Service Provision (ASP)) allow for cost-effective IT partnership structures. In other cases, alliances do not integrate their systems (e.g. Star Alliance), but operate jointly developed multi-user systems as cross-platform communication tools between allied carriers. These so-called middleware solutions (software which allows different IT systems to communicate with one another) are only a phase to full integration (also see Baker, *Behind the Handshake*, 2001, p. 67 for the status quo of alliance IT strategies). It is estimated that in highly integrated airline partnerships, cost savings of up to 20% can be achieved in acquiring assets - including IT (see Howarth and Kirsebom, 2000, p. 38).

It has been argued that there is an increased need for capital in the airline industry. It is true that airline management and operation endure many of the same capital-consuming phenomena that are present in other industries. Marketing, information technology

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<sup>54</sup> For the composition of the Star Alliance, see below (4.4.2.3.1).



expenditures and initial restructuring costs are good examples. Alliances can potentially be used to counter this need for extra capital through dedicated know-how transfer among partners. On the other hand, the potentially increased attractiveness of partnership structures through higher profitability levels can lead to capital markets behaving favourably towards allied carriers.

#### 4.3.2.1.2 Ground Operations

Ground operations, as part of the air transport value chain, comprise processes to handle passengers, baggage and cargo while an aircraft is not airborne. In addition, ground operations include the handling of the aircraft itself, which consists of loading and off-loading, cleaning, refuelling and moving the aircraft. Potentially, ground operations contain positive size effects, which are not necessarily dependent on the fleet size of an airline, or a group of partnering carriers. It is rather network density that comprises distinct cost-effectiveness for airline partnership operations. Network density describes the number of an airline or a group of airlines' flights handled at a specific airport.<sup>55</sup> Economies of density define production advantages resulting from higher utilisation of production facilities, therefore minimising idle capacity costs. In addition, scale effects occur, in the production of ground operations, and unit costs can be lowered by increasing and concentrating demand. Economies of density are thus the result of network density and lead to lower unit and production costs (see Youssef, 1992, p. 9).

A carrier only operating two or three services to a destination needs to, for example, supply about the same number of ground personnel than if it were operating at higher frequencies. This also applies to the provision of ticket counters, loading bridges, check-in and departure gates, computer systems and terminals, lounges and flight dispatch (for station tasks and expenses, see Weber, 1997, pp. 148-152). Positive cost effects in this regard can be achieved, not by necessarily increasing the size of the network, but by increasing production and utilisation of station facilities. Financially, economies of density occur if unit costs decline as a result of airlines adding flights or seats on existing flights (larger aircraft or denser seat configuration) with no change in load factor, stage length or the number of airports served (see Steininger, 1999, p. 186). This is why ground handling is significantly cheaper at an airline's own, highly-frequented hub, than at outer destinations. Co-ordinated partnership

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<sup>55</sup> Network density can be increased and yields benefits as airlines could possibly attract more traffic without extending their individual route systems through co-operative agreements and consolidation of facilities (see Youssef and Hansen, 1994, p. 416).

action has the same positive cost effects, provided that production and handling facilities are shared and run at higher capacities (also see Klein, 1996, p. 14).

Airline partnerships can capitalise on scale effects once they manage to jointly administer, negotiate and purchase ground operations input factors. In some instances, joint deals between a group of airlines and ground handling operators account for savings of between 10-20% over current, individual contracts (see Pilling, *Empire Building*, 2001, p. 54). Even in personnel, cross staffing can contribute to a commonly better utilisation of ground operation employees.

To benefit from density effects and in seeking cost advantages from the common usage of one ground operations provider, airlines occasionally acquire services from subsidiaries of members of alliance configurations. For example, the Swissair-South African codeshare and equity partnership also involved co-operation in ground handling, catering and apron operations provided by Swissair's subsidiaries.<sup>56</sup> While Swissair could sell services to its partner SAA, it could additionally utilise its existing ground operations infrastructure in South Africa more efficiently. This efficiency, in turn, could be passed on to SAA. In this sense, it seems to be crucial to adapt and to commit to "family membership" in order to achieve considerable savings and to avoid operational complications (see Buyck, *The Big Move*, 2000, p. 52).

Airport charges, as the last value chain aspect of ground operations, can be positively influenced by the size of the operation. However, both airports and handling agents argue vigorously that it is the shape of the demand peak, rather than volume that drives unit costs. The potentiality of reduction of ground handling costs depends on the competitive situation at a particular airport. Cost reduction opportunities will be influenced by the role of the airports involved (e.g., if monopoly power still exists), whether or not ground handling is already outsourced, and the dominance of individual alliance members at particular hubs (see Howarth and Kirsebom, 2000, p. 32).

#### **4.3.2.1.3 Maintenance, Repair and Overhaul**

Maintenance, repair and overhaul (MRO) mainly include, as key functions, servicing of the entire aircraft as well as assisting aircraft procurement with diverse supportive engineering expertise. Generally, MRO can be sub-divided into three functional sections: engine overhaul,

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<sup>56</sup> The equity partnership of the two carriers was, however, dissolved at the beginning of 2002.



overhaul maintenance and line maintenance. Non-engine maintenance includes aspects of airframe, avionics and landing gear (for checks and maintenance intervals and tasks, see Koblischke, 1997, pp. 8-10).

Traditionally, airlines themselves account for a high share of their equipment maintenance. For airframe segments' heavy maintenance, the quantitative share was 75% airline in-house MRO, 15% airline third party MRO and 10% independent MRO in 1999 (see Roland Berger Analysis in: O'Toole, *Aftermarket Allure*, 2000, p. 63). Carriers aim at driving down maintenance costs by transforming maintenance departments into stand-alone businesses like, e.g., Lufthansa Technik GmbH, or Singapore Airlines' SIA Engineering. The other way of streamlining MRO costs is by outsourcing functions to independent maintenance service providers and to aerospace manufacturers. These efforts can obviously be co-ordinated with horizontal partners to thus reap economic benefits from high volume bargaining and other size effects.

Engine overhaul contains cost savings potential through size effects, provided that maintenance tasks can be carried out on a sufficient number of identical, or related, engines. Cost degression can be achieved through learning curve effects and know-how advantages, through training costs-savings for maintenance staff and pooling effects in spare warehousing as well as equipment and facility usage. Additionally, a single airline or a group of airlines, as the buyers of aircraft engines, can enhance their negotiation position with engine manufacturers if the total number of purchased engines or spares gives them an augmented purchasing power through volume effects.<sup>57</sup>

Overhaul maintenance describes the upkeep of an aircraft's fuselage and its components. It requires a high degree of know-how and capital costs for spares, tools and maintenance infrastructure. Learning-curve and pooling effects lead to lower staff and material expenses as well as the elimination of equipment duplication. However, the cost savings potential of overhaul maintenance is lower than for engine maintenance (see Steininger, 1999, p. 175).

Smaller maintenance tasks and controls, on the apron, just before an aircraft takes off, are part of line maintenance. Scale effects for these pre-flight and ramp checks are of limited overall

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<sup>57</sup> The aircraft engine scene is, however, in a state of flux with engine manufacturers getting increasingly involved in financing and maintaining engines.

quantitative significance. As discussed earlier, network density and the flexible deployment of technical staff can lead to cost savings in this area.

If allied carriers were to combine their fleet purchases, they would most likely achieve volume discounts. In addition to the savings in the actual purchasing phase, there would almost automatically be savings on the maintenance side, as the partners' more or less identical planes could be jointly serviced. Airlines also experience positive cost effects in negotiating maintenance deals with MRO operators, whether they are aerospace manufacturers or other third party companies. This applies to all mentioned aspects of MRO. In the long run, the maintenance savings could, in fact, be higher than those on the purchasing side.

#### **4.3.2.1.4 Flight Operations**

Costs of flight operations are generally referred to as direct operating costs (DOC) and usually include flight crew salaries and expenses, fuel and oil, airport and en-route charges (by ATC), insurance, rental of flight equipment and/or crews (see Doganis, 1986, p. 76). Depreciation and amortisation in this aspect include flight equipment, group equipment and property, extra depreciation (in excess of costs), amortisation of development costs and crew training. These costs usually account for 40% of an airline's expenses and largely occur irrespective of the network output, and are thus temporarily fixed (see Steininger, 1999, p. 177).

The simplest way of decreasing average unit costs is by means of higher and more efficient equipment utilisation, also by filling denser aircraft seat configuration. This would lead to an almost cost-neutral increase of output. Load factors or break-even load factors are respectively indexes carefully monitored by airlines with an eye towards covering unit costs. Airline partnerships can unarguably help to fill capacity, which consequently leads to declining costs per passenger (see Klein, 1996, p. 14 and Lindquist, 1996).

Economies of scope hereby represent a main motivator and describe advantages created by the simultaneous production of different products. Scope effects materialise once a single airline, or one organisational entity can produce a range of products more cost-effectively than several airlines producing one product or service each. The benefits, however, only arise once inputs can be shared or utilised jointly without complete congestion.

A combined, cost-effective production of transportation services is generally best achieved through hub and spoke systems (see chapter 3 for network configurations). The coupled



production of transport services encompassing different destinations as well as frequencies and connectivity within one network, result in network economies. Adding one spoke to such a network increases the total number of flights disproportionately and, consequently, increases traffic and, potentially, load factors. In turn, feeding and defeeding traffic allow for operating larger aircraft on trunk routes with smaller unit costs per seat kilometre. Economies of scope are the pivotal motivator for the development of dominant network structures. If an airline cannot build a critical hub size itself in order to achieve scope effects, partnering can redress this problem. Feeder and defeeder services by smaller alliance partners are thus a regular feature at hubs of main global carriers.

Even though hub structures account for a better utilisation of aircraft, idle capacity still occurs as a result of seasonal, cyclical and otherwise motivated demand fluctuations. Wet leasing of idle aircraft among members in a partnership can reduce costs and optimise aircraft employment.<sup>58</sup> Joint aircraft utilisation planning furthermore supports the most efficient equipment deployment within a partnership structure. However, the driving factor behind positive DOC effects lies not necessarily in the fleet size, but is determined by the choice of equipment. As pilots are only rated on a limited number of aircraft types, and cabin crews require flight inventory training, operating a unified range of equipment has a positive effect. Low-cost carriers take advantage of this commonality and intensively use their equipment, which usually consists of only one type of highly utilised aircraft. This applies in an exemplary way to the US light carrier Southwest Airlines, or Ryanair of Ireland, both only using Boeing 737-series aircraft.

Cost considerations also motivate the joint creation and operation of network management systems. The aim, tasks and systems structure of network management are discussed below. The high rate of fixed costs to establish a network management system guarantees intercompany cost sharing and cost degression. Additionally, economies of information and economies of know-how play an important part in network management systems. Feeding data into the system requires substantial capital investment, although scale effects apply. Joint network management system operation, however, does not deliver full cost savings potential unless airline partners agree on joint fleet planning and network development as well as schedule co-ordination. In general, it is estimated that about 12% of the direct costs of

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<sup>58</sup> Wet leasing describes the letting or hiring of aircraft with crew. The technical and operational risk remains with the lessor.

network management can be saved if airlines co-operate intensively in this area (see Howarth and Kirsebom, 2000, p. 38).

Yield and revenue management systems optimise load factors by adjusting fares to demand structures. Similar to network management systems, their initial and running costs are positively influenced by scale effects. The fixed costs to purchase such systems as well as to build up the necessary knowledge are reasonably high and can be spread among co-operation partners. Similarly to network management, operational prerequisites have to be fulfilled to fully take advantage of positive cost effects of joint yield management systems. Among these are joint pricing strategies on joint routes (if allowed) as well as a physical or virtual centralisation of the systems.

Positive volume effects are only achievable for certain variable DOCs for a limited time horizon and if the fleet structure is not altered. One example of partly variable costs is labour, which is consistently at the centre of carriers' cost cutting strategies (see Doganis, 2001, p. 14). Costs for crew (cockpit and cabin) can be decreased by flexible crew rotations and smaller reserve capacities through cross-staffing. Crew rotations are easier to accomplish with higher numbers of available crew, which happens with shared crews. Airlines are establishing overseas crew bases with the aim to potentially staff crew on codeshare flights with partner airlines. The system is reciprocated by allied carriers and used to a large degree as an inflight marketing tool. Despite possible tension being created by the different criteria applied by airline partners with regard to crew selection, working standards, training requirements and other institutional and operational factors, costs are the driving factor for sharing and de-localising crew. Job exportation is obviously a main incentive, as wage levels can be lower in a partner's home market (see Cameron, *People Movers*, 1997, pp. 51-52). Indirect cost savings through crew utilisation occur once staff are deployed more effectively among partners. Costs for stand-by crew can be shared, flexible work plans can contribute positively to reducing staff costs and training expenses can potentially be brought down once larger staff volumes are trained. Crew training can be made more cost-effective if interairline partnerships manage to agree on a common basis for recruiting, crew instruction and service delivery standards. In addition, the above-described network density at partnership hubs comprises a further variety of crew utilisation and rationalisation challenges.

There are significant economies of size - also with regards to network density - when operating larger aircraft, since the labour input required, such as pilots, cabin crew as well as flight dispatchers and ground handling staff, increases non-proportionally to aircraft size.



Another approach, with the objective to increase staff productivity and bring wage unit costs down, is to enter into partnerships with smaller independent airlines. They operate on behalf of the larger partner on thinner domestic and short-haul routes. This practice effectively means outsourcing or contracting out activities previously done in-house to a partnering carrier. Cost savings of up to 10% can be realised in this area (see Howarth and Kirsebom, 2000, p. 38).

#### **4.3.2.1.5 Passenger Service**

Passenger service costs represent a crossover between DOC and indirect operating costs (IOC). Ground personnel for check-in, gate and lounge services as well as inflight service, entertainment and catering are important features in an airline's differentiation strategy, but play a less significant role in contributing to cost benefits through scale effects.

Inflight catering is a high volume and high value business with airlines spending about USD 10 billion per year (see International Flight Catering Association (IFCA), 2001). To reap cost benefits through outsourcing value chain functions, airlines have been selling off their kitchens since the late 1980s and early 1990s. To a certain degree cost-effectiveness and operational efficiencies could be achieved through these strategic outsourcing decisions (see Pilling, *Drive to Outsource*, 2002, p. 38-39). The air catering market is now dominated by Lufthansa's LSG SkycheFs and GateGourmet, the former catering subsidiary of the Swissair Group. Between them they control about 55% of the market and through scale effects can offer competitively priced meals (see Pilling, *Food for Thought*, 2001, p. 48). The next step in bringing down catering costs will be global catering deals for airlines or alliance partnerships. It is estimated that about 10% cost savings can be achieved in catering through collective buying power (see Howarth and Kirsebom, 2000, p. 38).

It appears that passenger requirements for inflight experiences are becoming ever more demanding. The market, however, is not necessarily characterised by mere luxury, but rather by products that convey the carrier's values and brand message. Low-cost carriers deliberately offer bare essentials, while internationally operating carriers have entered the race to introduce high-end entertainment and communication systems on their long-haul flights (see Pilling, *Flights of Fancy*, 2001, p. 47). Inflight innovation frontrunners are the premium classes, but airlines need to create a strong brand experience as a hospitality provider for all their passengers. Individual passenger solutions, such as personalised TV sets with video on demand, or Digital Versatile Discs (DVD) applications, represent the classic, but rather

passive entertainment offers. Internet access is a more interactive way of providing passenger entertainment and communication tools are in the course of being introduced. The next level of service will see a more robust Internet access and the ability of passengers to use their own mobile telephones on-board.

Technological innovation regarding inflight entertainment is characterised by ever shorter product life-cycles, on the one hand and mounting costs to develop systems and upgrade entertainment facilities, on the other. The total market expenditure for inflight entertainment was estimated to be around USD 2,2 billion in the year 2000 with a 10% yearly growth rate (see World Airline Entertainment Association (WAEA), 2001). Broad-band Internet and telephonic communication technology are costly to develop and to operate. Size effects and the collective bargaining power of airlines or groups of carriers are relevant with regards to sophisticated entertainment systems. Technology providers as well as aircraft airframe manufacturers and suppliers will pass positive scale effects on to the purchasers and this will lead to cost savings.

#### **4.3.2.1.6 Marketing and Sales**

Marketing is one of the most important, if not the most dominant, motivator for airlines to enter into horizontal collaborative agreements (see Töpfer, 1992, p. 174). Partnership marketing can produce a host of operational and commercial variations. The focus, however, is on illustrating possible cost savings potentials in marketing and sales processes in collaborative airline agreements.

Market and passenger communications constitute a substantial cost factor in airline marketing. Airlines' sales organisations account for considerable portions of operating costs, but hold cost savings potential through scale effects. The set-up of marketing and sales organisations in foreign countries and regions, or just outside airlines' home markets, usually generates high expenditures and slows time-to-market. These initial expenses comprise facilities costs, costs for market intelligence and staff. Airlines jointly competing in the home market of one partner can offer a broader reach with a minimum investment. Reduction of duplication in areas of sales, distribution and administration is likely to lead to a decline in the number of employees and removal of redundant roles and tasks in shared locations.

One of the greatest barriers to entering a new foreign market is the cost of buying or influencing market share and retaining customers. These costs occur in the form of travel agent and corporate incentives and commission schemes, introductory fares, special



promotions or advertising efforts. Through strong alliances, carriers can tap into an already established passenger base at a fraction of the costs of full single market entry or penetration. Existing passenger details and locally-specific consumer patterns, crucial for target marketing, can be utilised - this decreases the deployment of resources and increases the speed to serve the market.

Other sales tools like CRS, call centres, sales offices or Internet-based applications can be jointly established, or dedicated responsibility can be assigned to a partner. Set-up and administration usually turn out to be more cost-effective within partnerships. The same applies to customer relationship management (CRM) and FFP systems that can be purchased or developed, maintained or/and amended, administered or outsourced on a lower expenditure level, once realised in co-operative structures (see Association of European Airlines, 1998, pp. 55-56).

The tools indicated above, together with marketing and sales processes could, however, even be totally outsourced to a partner, which would guarantee the highest possible degree of cost-effectiveness in distributing the air transport product in a non-home market. Members of the Qualiflyer Group of airlines are strongly dedicated to the so-called "Home-Market-Principle", which involves distribution of the entire range of the multilateral alliance's products being assigned to the home market carrier. Airlines like Northwest and KLM have merged their marketing operations, including sales, and have abandoned distribution efforts in each other's home region, allowing them to develop reciprocal marketing efforts that increase service at lower costs (see Nelms, 1999, pp. 27-30).

Individual market entry usually demands high expenditures for awareness and image campaigns. An airline exploiting existing relationships with the advertising and public relationship agencies of a partner, can substantially decrease costs and initial friction with business allies (see Netzer, 1999, p. 61). The example of Northwest and KLM again shows a successful implementation of joint advertising programmes, as each carrier has its assigned regions to handle advertising for both operators (see Nelms, 1999, p. 30). Other alliances follow different strategies, with the carriers being united under one brand, e.g. the Oneworld brand (see 4.4.2.3), having jointly developed and published a global image campaign. However, the campaign management is in the hands of the individual carrier in its respective region of the world.

#### 4.3.2.1.7 Summarising Aspects of Cost Motivations in Airline Partnerships

Increasingly, airlines are paying close attention to strategies pursuing sustained profitability. One of the key contributors is evidently cost cutting schemes. Airline partnerships can ostensibly help to positively impact on a carrier's cost structure along the value chain.

Areas and dimensions of cost reduction depend on deepening levels of co-operation and integration. This connection, also with reference to other collaborative benefits, is of cardinal importance for the following delineation. A study (Howarth and Kirsebom, 2000) arrived at the quantitative cost savings conclusions as illustrated in table 4.2. The assumption that expenditure reduction potential increases with the intensity of the partnerships was taken into consideration by categorising the cost saving potential into different integration clusters. The integration cluster continuum can be described as follows (see Howarth and Kirsebom, 2000, p. 5):

- Co-ordinated: limited operational and strategic co-operation
- Shared: co-ordination is tightened to realise operational cost benefits through integrated facilities and services
- Unified: assumption of a new organisation structure with much of the business being run under common control in a joint venture or "virtual merger" featuring significant equity participation (which is, however, not essential)

To point out the position in the value chain, business processes have been assigned to value chain levels and added to the table. Cost savings potentials are broken down with regard to the integration intensity.



Table 4.2: Quantitative Cost Savings Potentials

Value Chain Position	Business Process Cost		Cost Saving Potential		
		Percentage of Total Costs	Co-ordinated (in % of business process)	Shared (in % of business process)	Unified (in % of business process)
Procurement/ Finance	Acquire Assets	13,0%	0,5%	5,0%	20,0%
Ground Operations/ Passenger Service	Service Delivery - Ground Handling	22,5%	4,0%	4,0%	5,0%
Maintenance	Maintain Assets	8,5%	1,0%	2,0%	5,0%
Flight Operations	Network Development Management	1,0%	5,0%	7,5%	12,5%
Flight Operations	Demand and Pricing Management	1,0%	5,0%	7,5%	12,5%
Flight Operations	Operations Control and Co-ordination	1,0%	5,0%	7,5%	12,5%
Passenger Service	Service Delivery - Inflight	32,5%	0,0%	2,5%	10,0%
Passenger Service	Product and Service Development	2,0%	5,0%	7,5%	12,5%
Marketing/ Sales	Sale and Distribution	14,0%	2,0%	15,0%	20,0%
Marketing/ Sales	Customer Relation Management	2,5%	5,0%	7,5%	12,5%
Misc.	External Environment Management	1,0%	5,0%	7,5%	12,5%
Misc.	Support Services	0,5%	5,0%	7,5%	12,5%
Misc.	Business Management	0,5%	5,0%	7,5%	12,5%
			Cost Savings in % of total Costs		
	Total	100,00%	1,9%	5,6%	11,4%

Source: Howarth and Kirsebom, 2000, p. 38 and own supplements

The study also concluded that for an airline with an annual turnover of USD 10 billion (e.g. the range of Air France or Northwest Airlines), 600-800 full time equivalent staff will be needed to work on the implementation of cost saving measures in IT, marketing, passenger service operation and sales. Approximately the same level of effort is required in training. Other functions, like yield management, network development, schedule planning, maintenance, purchasing, legal, strategic and senior management will require a smaller number of personnel - approximately 100 - but the costs and the impact on the departments will be high. External costs such as new IT platforms and systems, advertising, airport infrastructure charges, communications and training material, and professional advisors have to be included in the calculation as well. The study estimates the total costs for an airline of the above-mentioned size to be around USD 150-200 million per annum for the early years of a significant multiple partner alliance. Thus, depending on the capitalisation policy and the make-up of costs in any one airline, it is likely that in the early years of an alliance the project

costs will eat into the potential benefits from reduced costs to a significant extent (see Howarth and Kirsebom, 2000, p. 40).

Combined potential revenue and cost benefits can produce a profit improvement of up to 14% of revenue. In an industry where long-term return on sales of 5% would be considered good, this is obviously an attractive ambition (see Howarth and Kirsebom, 2000, p. 41). However, revenue and cost benefits behave differently - both in relation to time scale and to the degree of integration (also see Tarry, 1999, p. 92). Cost reduction benefits are offset in the early years by project costs (albeit being dispersed across the organisation) and require time to achieve the deeper integration levels that are the source of sustainable benefits. Increasing infrastructure costs, cost through complex co-operational problems, training and communications expenses will most likely escalate initially (see Howarth and Kirsebom, 2000, p. 42). Cost increases within the co-operation are often the result of diseconomies caused by the complexity of the joint business as well as integration difficulties (see Flint, 1998, *Is Bigger Better?*, p. 32, Doganis, 2001, p. 79).

Many of the above-mentioned cost savings potentials tend to be theoretical constructions in airline partnerships. Joint purchasing of aircraft, for example, which contains huge expenditure efficiencies, is far from being widely practised. Lufthansa and United Airlines, as two of the core and founding members of the Star Alliance, have so far not managed to jointly purchase equipment. And while Skyteam members may have a global agreement with Coca Cola, they do not have one with Airbus or Boeing. Cost-effectiveness and productivity are core tasks of airline operations in the current period of accelerated structural and organisational change (see Morrell and H-Y Lu, 2000, p. 81). However, there is a clear lack of collaboratively realised cost benefits. Even where joint purchasing occurs, there seems to be a tendency to collaborate on the smaller and less controversial items. Strategic purchasing only takes place very infrequently. Currently, the achievement of cost goals through airline partnerships in a comprehensive operational and commercial manner seems to be more an idea than a business fact.

#### **4.3.2.2 Market and Regulation Motivated Co-operations**

Many interairline partnerships are market motivated and thus driven by external stimuli. It seems that partnerships to achieve cost savings are important, but so far they have been less common than market motivated co-operations. The following aspects of market extension and



circumvention of restrictive regulations are inter-linked for international expansion outside integration regions, but are discussed in separate paragraphs.

#### **4.3.2.2.1 Market Extension and Market Share Gain**

Access to new markets and market extension, as well as offsetting country-based disadvantages through airline alliances, are seen as an attractive possibility to compete in the marketplace.

While an airline may, for various reasons, be restricted from physically serving a particular city in a particular country, alliances allow carriers to share passengers or to gain access to a new base of air travellers at reduced cost and in a reasonable time frame. In addition, airlines cannot realistically grow themselves unilaterally into widespread networks, funded by their own aeroplanes, airport facilities and employees. It is usually impossible for carriers to duplicate the network coverage of incumbent carriers at their respective hubs. The only sensible way of increasing reach and market share in the current regulatory and bilateral legacy environment seems to be through horizontal partnerships. Alliances thus seem to be an alternative to costly internal, unilateral growth strategies, or where expansion simply is not permitted. These goals, extensions and market share gains are interdependent and are discussed simultaneously.

The underlying emphasis in any marketing-driven airline partnership comes from a carrier's determination to reap economies of scope by extending route networks. The motive behind many of such partnership agreements stems from the fact that airlines that will be in the best position to compete in future, will also be those offering the most extensive networks, regionally as well as globally. Additionally, the more routes a network comprises, and the more these routes can be occupied, the more economies of scope are achievable. If this growth in reach as well as in market share is achieved without an airline needing internal expansion, but with external growth, the risks for the partners are limited and the main partnership goals can be achieved.

Hub and spoke systems are often used to facilitate market development and extension, but initially exhibit more economies of scope. The more cities an airline or a partnership structure has in its system, the more valuable the hub is (see Flint, *Is Bigger Better?*, 1998, p. 32). This value is solely represented by the network size through the number of connections offered and other operational, organisational and financial advantages. By feeding traffic from one flight to another, a partner's reach quickly expands exponentially, while the other partner enjoys

increased load factors and greater profitability on its service<sup>59</sup> - as described earlier. Airline yield may improve at hubs, but especially at dominant hubs and capacity constrained airports. In highly concentrated market structures, average fares are usually higher than in more balanced markets, which is usually due to airlines being able to charge hub premiums. However, it needs to be considered that not all alliance-participating market players can charge higher prices; only the dominant airline can. The determining factor for this phenomenon is not primarily the concentration of market players, but the market share an individual airline has in city pair markets (see Steininger, 1999, pp. 222-223). Nevertheless, hub advantages almost automatically lead to market share gains. The establishment of fortress hubs, i.e. dominant hub structures that prevent competing carriers or airline partnerships from successfully entering a geographical market, facilitates market share prevalence. Increased traffic feeding into established gateways to increase load factors and improve the yield mix, make existing hub operations competitively more viable and contribute to hub market strength.

Feeder traffic plays an important role in market-driven expansion strategies and in connection with hub strength. Without an infrastructure shuffling passengers from neighbouring regions to an airline's hub, high frequencies and a comprehensive network could not be operated profitably. Even with low volume markets, airlines can link their hubs by making use of commuter carriers. Commuter carriers or secondary carriers thereby fill a niche that large incumbents refuse to enter. The choice of equipment and the service philosophy usually cater specifically for low-volume, short-haul markets. As these regional airlines only serve a limited number of geographically confined markets, trunk carriers usually need to establish a range of co-operations with several secondary airlines to cover a sufficient number of smaller markets.

One advantage of co-operating with secondary airlines is that they usually carry a large portion of high yield business travel. Passengers choosing a regional carrier as feeder transport to a trunk route will most likely select the allied trunk carrier for their onward journey. This, however, requires the trunk carrier to increase the passengers' benefits and to

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<sup>59</sup> In principle, as a network grows, the degree of connectivity increases approximately as the square of the number of airports served. For example, a single airline serving 20 airports from its main hub can potentially provide 420 connecting and direct flights, or 210 distinct services (with outbound and return flights counted as one service). If the airline forms an alliance with a partner also operating at 21 airports (with one common airport), the number of possible connections increases to 1,640. These figures are, however, theoretical, since some potential connections will be relatively unattractive, or already be available through interline traffic (see Association of European Airlines, 1998, pp. 30-31).



provide journey convenience by adjusting schedules and infrastructure at the hub. Successful market extension calls for a far-reaching optimisation of traffic flows from remote commuter markets into the global network. Globally operating airlines can thus only secure a high degree of market penetration by means of optimising and extending existing hubs through the creation of regional networks and/or the development of functional multi-hub networks. In a next step, this regional traffic needs to be linked with the carrier's global network to offer highest passenger demand satisfaction and convenience.

Integration of individual continental markets seems practical for carriers of the same continent which do not possess a sufficiently sized intercontinental network, or which need to re-dimension it. In Europe, this applies to flag carriers of geographically smaller countries endowed with only a limited home market potential, which does not allow for high frequencies on intercontinental trunk routes - such as Swissair and KLM. Competition for these carriers arises from foreign airlines exploiting 6<sup>th</sup> freedom traffic rights with these countries in order to feed their own intercontinental networks. By way of poaching passengers and exporting traffic to their own hubs, 6<sup>th</sup> freedom carriers can consequently pose a significant competitive threat to home carriers of small countries (for air transport strategies of small countries, see Antoniou, 2001). In order to defend their own competitive position, it can therefore be beneficial for smaller carriers to enter partnerships with larger airlines and to feed traffic into their respective international network. The home-carrier would thus serve as a feeder, taking passengers originating from its own home market to the hub or multiple hubs of an allied carrier. A small partner carrier would ideally have a home hub from which to collect local or regional traffic and shuttle it to a partner's hub and from there onwards to intercontinental destinations. The intercontinental 6<sup>th</sup> freedom carrier would benefit from a virtual enlargement of its own home market. Sixth freedom traffic can thus turn into a competitive advantage for the operating carrier, as it increases the size of its potential passenger base and expands passenger awareness in the smaller partner's home market. On the other hand, a partnership can stabilise the competitive position of a home carrier in its confined market, as feeder and defeeder services guarantee equipment occupancy and possible competition is "managed" as part of a collaborative agreement.<sup>60</sup>

It becomes increasingly important for carriers with a small home market, but a large intercontinental network to either co-operatively expand their home market base, or serve as a

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<sup>60</sup> This set-up example applies to the partnership between Lufthansa and SAS (see e.g. Steininger, 1999, p. 239).

feeder for other large carriers. In Europe, Swissair and KLM are leading examples of these strategies. With the new strategic orientation of the former Swissair at the beginning of 2002, the carrier had to decide whether to be a feeder for another network, or to feed its own hubs in Zurich and Geneva through a range of partners.<sup>61</sup> To efficiently and profitably operate its large intercontinental networks, KLM too has to import traffic by means of transporting 6<sup>th</sup> freedom passengers - ideally through partnerships (see Steininger, 1999, pp. 239-240). This nonetheless implies the need for other countries and airlines to export traffic. Obviously, the benefit for an alliance is enhanced once traffic importers and exporters form a partnership. However, traffic exporters are not necessarily carriers with small home markets, but are airlines that have not penetrated their home market sufficiently, e.g. Alitalia. The strategic challenge and advantage of concluding a partnership with a carrier that has not penetrated its home market, thus mainly lies in deterring non-allied carriers from poaching an exporter's market.

There are more reasons for the attractiveness of market extension through network enlargement. Besides the above-mentioned cost considerations, airlines seek marketing advantages through widespread and interconnected network structures. Larger networks attract more passengers, especially connecting passengers. Passengers see additional advantages in being served online by one carrier or members of a partnership (quasi online), rather than interline. The value of passenger loyalty programmes is naturally augmented once a single airline, or consolidated flight operation, can offer a wide range of connections allowing the passenger to earn and redeem FFP credits. FFP advantages as well as co-ordinated fares and capacities among partnering carriers furthermore leverage a partnership's position at a hub (see Gallacher, *Power to the Plans*, 1997, p. 34).

#### **4.3.2.2.2 Circumvention of Regulative Market Growth and Market Access Restrictions**

Market access through interairline co-operation has been discussed in some length in the previous section (see 4.3.2.2.1). The reason for this type of strategic expansion action and the general decision in favour of external growth lie in economic considerations, but are also externally motivated by the statutory and regulatory environment. As a result of restrictions on market entry, route designation, capacity and ownership, airlines have been and still are prevented from introducing new services. Where other industries, whether or not formally

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<sup>61</sup> With Swissair's bankruptcy and its alliance network disintegrating in late 2001, the re-launch of the new Swiss airline from Swissair's remnants and in conjunction with Crossair at the beginning of 2002, will most likely follow the strategy of being a feeder carrier to another larger alliance network.



regulated, have succumbed to the economic pressure towards larger size, wider marketing spread and true globalisation through cross-border acquisition and mergers, the airline industry has been prohibited from doing so.

As a result of these restrictions, many domestic and regional markets remain protected and can only be served by indigenous carriers. For example, while European airlines operate on limited US domestic sectors, they may only carry traffic transferring passengers to or from international flights at gateway airports. They are therefore unable to penetrate US domestic markets, which account for about 33% of world air traffic, and build alternative US-based networks capable of feeding their transatlantic and intra-European services (see Association of European Airlines, 1998, p. 29).

In most cases, airlines are prevented from owning or acquiring a controlling interest in other foreign carriers as a result of national regulation.<sup>62</sup> In order for airlines to be designated by their governments to implement the traffic rights which their specific nations enjoy under air service agreements, they must be substantially owned and effectively controlled by nationals of that state (except in and among the EU member states). In addition, such legislation typically requires *de facto* control to remain in the hands of home country nationals, regardless of the size of the foreign stake (see Oum et al., 1993, p. 16). For example, foreign ownership of USA-registered airlines is limited to 25%, and hence European carriers are unable to take control of established US domestic networks through acquisition. However, a similar ruling applies to Europe where airlines must be in majority (51%) EU ownership.<sup>63</sup>

Other countries have matching restrictions on airline ownership. There are various reasons for these regulations, since many countries associate national prestige with an independent national flag airline, and take-overs or mergers of such airlines by foreign interests would be politically unacceptable and would undoubtedly be resisted. This virtual prohibition of cross-Atlantic and other cross-border concentration outside integration regions characterises alliances as a merger emulation, since this tool best mimics the positive effects of consolidation in a regulative environment that does not fully allow mergers and acquisitions.

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<sup>62</sup> National concentration, however, occurs widely (see Doganis, 2001, pp. 57-63).

<sup>63</sup> If a carrier were to be majority-owned by foreigners, this would result in a loss of traffic rights for that carrier. Anomalies nevertheless apply: Cathay Pacific, for example, is a substantially owned and effectively British controlled airline, operating out of Hong Kong, which became part of the People's Republic of China in 1997. ASA with other countries circumvented the fact that Cathay was not Hong Kong owned by replacing "substantial ownership and effective control" by "principal place of business" as a key criterion for designation (see Doganis, 2001, p. 49).

Airline alliances do not just have an increasing impact on the negotiation of bilateral aviation pacts,<sup>64</sup> but they also circumvent the restrictive terms of agreements, allowing an airline to gain otherwise-prohibited and desperately wanted access to foreign markets. Co-operating with additional airlines is a means of tapping into worldwide traffic flows and enhancing the global reach of a carrier's networks, which might otherwise be limited by the traffic rights which its national government was able to negotiate. Where restrictions on cabotage prevent international carriers from serving domestic routes and where, under existing bilateral air service agreements, the domestic carrier has no traffic rights in the relevant international route, airline partnerships seem to be a remedy in their strive for market extension by circumventing bilateral agreements.

Apart from nationality and ownership rules, there is an abundance of other regulatory barriers to airline mergers and acquisitions. Governments trying to suppress anti-competitive behaviour, or to avoid the abuse of dominant market positions have established regulations to prevent the distortion of competition. Control is either executed by governments directly, or through special competition authorities. While these authorities may have a domestic orientation, more and more bodies take decisions with an extra-territorial dimension. This was the case with the proposed merger of Honeywell and General Electric in 2001, which was blocked by the European Commission, despite the fact that it was a mainly US American merger. The airline industry also falls victim to this regulation, which gives it an even bigger driving force to engage in other forms of close co-operation.<sup>65</sup>

The above-mentioned factors describe incentives to form interairline partnerships, but also highlight a principal paradox of airline collaboration. Although deregulation and market liberalisation made airline alliances both necessary and possible, the remaining vestiges of regulation and competition control alliance forming to a certain degree and constrain the forms airline co-operation can take.<sup>66</sup> It is because of this that alliances are still in the phase of emulating mergers and thus cannot reap the benefits of true concentration and competition. Table 4.3 describes different evolutionary market stages in which alliances have different

<sup>64</sup> See, e.g., the partnership negotiations between British Airways and American Airlines and the resulting negotiations between the UK and the USA regarding open skies.

<sup>65</sup> Intra-European partnerships are mostly scrutinised by the European Commission's competition directorate. The latest example was the authorisation of the Lufthansa/Austrian Airline partnership (see The European Commission, Notice pursuant to Article 16(3), 2001 and Phillips, 2002, p. 15).

<sup>66</sup> Paradoxically, the proposed close collaboration between American Airlines and British Airways is driven by operational limitations for both carriers due to the regulatory, bilateral environment. However, the launch of their comprehensive partnership has so far been hampered by competition authorities on both sides of the Atlantic demanding that the airlines relinquish slots and open their markets to more competition.



focal points and characteristics (see Howarth and Kirsebom, 2000, p. 45). The highlighted areas symbolise the current stages of development and thus describe the airline alliance paradox.

Table 4.3: Evolutionary Alliance Market Stages - the Airline Alliance Paradox

	MARKET DEVELOPMENT			
	Nascent	Frenzied	Turbulent	Mature
Statutory Market Structure	<i>Minimal Regulatory Freedom</i> <ul style="list-style-type: none"><li>• strict control on ownership</li><li>• strict regulatory over-ride</li></ul>	<i>Regulation relaxed</i> <ul style="list-style-type: none"><li>• minority foreign stake allowed</li><li>• operating restrictions still exist</li></ul>	<i>Regulation liberalised</i> <ul style="list-style-type: none"><li>• fully-owned subsidiary allowed</li><li>• market for corporate control emerges</li></ul>	<i>Market Deregulation</i> <ul style="list-style-type: none"><li>• free equity and capital flows</li><li>• operating freedom</li><li>• active market for corporate control</li></ul>
Alliance Focus	Market Skimming	Market Access	Market Growth	Market Integration: <ul style="list-style-type: none"><li>• optimised global business system</li></ul>
Characteristics of Alliance Environment	Low-profile, non-equity based collaborations	Rapid formation of joint ventures	Dissolution of joint ventures, emergence of cross-border M&As, fully owner subsidiaries	Full set of vehicles

Source: Howarth and Kirsebom, 2000, p. 45 and own supplements

The alliance focus has reached a stage of maturity with airlines striving for global reach and growth beyond their traditional boundaries. The statutory market structure as well as the alliance environment characteristics is trailing the airlines’ abilities to participate in globalisation and open competition. In sum, airlines thus have to utilise traditional competitive tools - alliances - because of the structure of the external environment, despite their own sophistication and readiness to move towards more contemporary approaches in order to face a globalised and concentrated industry.

4.3.2.3 Revenue-oriented Motivations

Besides cost-driven incentives and motivators to circumvent regulatory hurdles, revenue generation plays an equally important role in the formation of interairline partnerships. Revenue-oriented motivators can have various beneficial impacts. The following discussion distinguishes between marketing and market motivators.

4.3.2.3.1 Marketing and Distribution Motivations

Marketing is seen as one of the paramount factors contributing to positive collaborative effects in partnership structures, not just in terms of cost-effectiveness, but also due to its immediate revenue potential (see Töpfer, 1992, Bucklin and Sengupta, 1993). Demand satisfaction thereby represents the focus of airline marketing efforts.

Passenger numbers in collaborative airline structures can be increased for each individual carrier as a result of marketing benefits by expanding scope and network spread (see Park and Zhang, 1998 and Doganis, 2001, p. 75). Schedule co-ordination to optimise connection times between alliance carriers can increase traffic and thus revenue. As discussed earlier, it serves passenger convenience to offer fluid, seemingly on-line connections. All phases of the travel experience; pre-, in- and post-flight herald positive aspects for travellers once online services can be enjoyed. At a minimum, a partnership is likely to offer transaction-cost saving in travel service purchasing, more convenient transfer times, shorter walks between inbound and outbound gates at airports, the chance to collect points or miles on a single FFP, and in case of problems and criticism, the liaison with only one passenger service department.

Schedule integration and co-ordination allows for higher frequencies and decreases in schedule waiting time, flight time and waiting time for connecting flights. Optimising transfer connections amplifies travel convenience and helps to lure traffic volumes from non-alliance airlines or those with less suitable schedules. Especially time sensitive business travellers prefer time-saving connections during peak business hours. In hub and spoke networks, co-operations can allow higher frequencies and more destinations. Enticing passengers away from other airlines and stimulating air traffic through beneficial connections consequently increase revenue. Co-ordinated schedules and capacity planning can help to increase efficiency of aircraft loads and thus contribute to additional revenue.

Furthermore, CRSs show co-ordinated and fluid virtual online routings higher on their screens, which in turn influences distribution significantly. Under a codesharing arrangement (see detailed explanation 4.4.3.2), international flights may be listed on CRS screens under the airline codes of both carriers, even though the flights are only operated by one of the alliance partners. This double listing of flights can crowd out competitive offerings, perhaps pushing these offerings right off the screen, thereby allowing the alliance to divert passengers from its competitors (see Dresner and Windle, 1996, p. 205).

Augmented benefits through alliance FFPs is considered to be another strong marketing and thus revenue-generating incentive for carriers to engage in partnerships. It can be argued that the FFP component is one of the most important parts of an airline alliance (see Gallacher, Power to the Plans, 1997, p. 34 and Petersen, 1997). Being in an industry where commodities are largely distributed, a functioning FFP is a powerful tool for product differentiation (see Bhagwanani, 2000, p. 88). Hopes that loyalty programmes will increase seat sales by either



generating repeat business among loyal customers, or, if the programme is competitive enough, by attracting new passengers, is the main motivation to establish FFPs.<sup>67</sup>

Along with the immediate effects on customer convenience through rewards for patronage, come communicational aspects by using the FFP member database. Socio-demographic customer information and data evidencing their travel patterns do not just represent valuable sources for core product enhancement. FFP data can be used as distribution facilitators for other travel-related products, such as all-inclusive or diversified offers, e.g. financial or insurance services.

FFPs, agency loyalty programmes and CLPs all create economies of scope regarding the reward structure for their respective target market, as it is easier to receive gratification from a larger network or a bigger carrier. The attractiveness of FFPs with reference to the award structure is determined by the width of destinations offered by an airline or a group of airlines. This is why larger carriers, or FFPs being based on broader route networks, have a competitive advantage above smaller airlines. As described above, commission overrides represent additional incentives for agencies to retail the products of a carrier that already has a powerful market position. The same applies to large networks. If a travel agency can cover a wider range of client needs by distributing products of an alliance network, it will benefit in a twofold way - by client revenue and commission payments of the airline or network.

A further marketing-motivated incentive supporting the formation of airline alliances is the direct financial benefit for customers. Supported by a well-publicised study, Star Alliance pointed out that the combination of codeshare partnerships, paired with US antitrust immunity, could lead to customer savings on fares of up to 27% compared to inter-airline pricing (see N/A, Star Alliance - What's New, 2000 and Brueckner, 2000, p. 9). Alliance networks make immense communications efforts to advertise these financial incentives to their clientele.

These passenger savings are in vast contrast to pricing power. Pricing power, based on network strength and hub dominance, is seen as a rationale behind revenue increases of airlines involved in horizontal partnerships (see Jäckel, 1991, p. 144). Yield premiums can be harvested on high frequency routes between alliance hubs. These intra-alliance hub yield

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<sup>67</sup> Passengers are usually willing to pay a premium for a functioning FFP (see Prousaloglu and Koppelman, 1999). This premium increases with the value of the FFP, which is determined by its scope.

premiums can be approximately 10% above that of more openly competitive markets (see Howarth and Kirsebom, 2000, p. 33). Premiums of this type especially apply to congested gateway-to-gateway links between business centres in the North Atlantic market.

Furthermore, economies of information pertain to creating general awareness for a carrier and its range of services and products. Once a passenger has been captured as a client of an alliance, information effects assist in providing this passenger with the wide range of alliance offers. It is also easier for the consumer to economise on search costs by using the airline partnership for more than one service once he or she has become familiar with it (see Flint, *Is Bigger Better?*, 1998, p. 32).

#### **4.3.2.3.2 Market, Network and Hub Motivations**

Alliances can lead to total market share increases for each participating carrier by an extension of the geographical reach (see Doganis, 2001, p. 75 and above). The possibility to enter markets, which are otherwise inaccessible, through alliances presents significant revenue potential.

The feeding and dispersal of traffic to an increased number of destinations gives collaborating carriers a lead over their un-allied competitors. Existing hub and spoke systems can benefit from partnership programmes. In local or international markets, each partner can make use of the partner's hub and spoke network to feed its own international routes and distribute traffic. (see Dresner and Windle, 1996, p. 205). The above-mentioned benefits from market access and market share gains through hub and spoke networks can be directly translated into revenues. The size of the network plays an immensely determining role in its attractiveness to passengers and thus for the distribution trade as described above. This especially applies to high yield business passengers.

Fortress hub structures can be strengthened through airline partnerships as feed to and dispersal of traffic during attractive, peak slot hours increase entry barriers for potential competitors. A less openly mentioned motivator is thus the reduction of competition through airline partnerships. Route-specific or regional alliances, in which partners serve the same hub, usually lead to a reduction of effective competition. Mitigating effects on competition and increases of market power with possible leveraged revenue potential occur where airlines decide to co-operate on routes without a third competitor. Co-operation can be in the form of one carrier completely relinquishing routes to the benefit of the partnering airline. Another form would be for both carriers to maintain their services, while offering codeshare



connections and co-ordinating frequencies, schedules and joint sales efforts<sup>68</sup> (see Doganis, 2001, pp. 79-80 and below for codesharing).

The effects on competition of both configurations are similar. The reduction or possible elimination of competition serves monopolistic or duopolistic market behaviour, with immediate consequences for revenue generation. Where competition is reduced, extra rents in the form of hub premiums can be achieved in distributing the product to passengers (see Borenstein, 1989, p. 357). In addition, higher capacity shares through partnerships lead to disproportional increases in market shares by superior load factors (see Steininger, 1999, p. 224 and Jäckel, 1991, p. 146).

Airlines with a strong long-haul but weak domestic or regional market benefit distinctly from airline alliances. KLM was traditionally a long-haul carrier, with a very small domestic and a weak European network. Through the development of key regional alliances in the UK, Germany, Scandinavia and France, KLM managed to support its Amsterdam Schiphol hub and thus its long-haul flights. KLM further entered markets of its alliances partners, importing traffic, thus generating additional revenue.

#### 4.3.2.3.3 Revenue Gain Quantification

In sum, revenue gains by airline alliances mostly come at the expense of competing airlines. It is the redistribution of traffic rather than market growth that drives the additional revenue generation (see United States General Accounting Office, 1995, p. 9, Park and Zhang, 1998, p. 246, Tarry 1999, p. 92). However, it is likely that at least some revenue originates from traffic stimulation caused by increased competition among alliances and between alliances and other airlines in the short term.

The revenue success of airline alliances seems difficult to quantify. In an early study, the US American General Accounting Office (GAO) calculated that the alliance between Northwest Airlines and KLM produced an increase in ridership of 350,000 passengers for both carriers in 1994. In revenue terms, Northwest could additionally generate between USD 125 and 175 million through the partnership (see United States General Accounting Office, *Airline Alliances Produce Benefits*, 1995, p. 4). Lufthansa published extra revenues of DEM 500 million in 2000 as a result of all its partnerships, which is about 0,5% of Star Alliance's total

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<sup>68</sup> Swissair and Sabena dominated all major connections between Brussels and Switzerland after Swissair Group's capital investment in the Belgian carrier. Lufthansa and SAS have dominated the German-Scandinavian market since the start of their partnership in 1995 (see Doganis, 2001, p. 80).

revenue and about 2% of Lufthansa's operative revenue in the year 2000 (see N/A, Lufthansa AG - Investor Relations, 2000). Austrian Airlines once estimated additional annual profit from its Star Alliance membership to be around USD 20 million in 2001, at a yearly turnover of about USD 1,6 billion (see Feldman, *Alliance Costs Start Building*, 2000, p. 41). Some authors consider that the potential revenue increase of airlines in alliances will fall into the range of 2-5% of revenue (see Howarth and Kirsebom, 2000, p. 35).

Although these gains are often relatively small compared to such measures as a carrier's overall international operating revenues, they represent key sources of new traffic and extra revenue for participating airlines in an industry characterised by razor-thin profit margins. The magnitude of these gains depends on the geographical scope of the partnership arrangements and the level of integration achieved by allied airlines. However, total gains from partnerships need to take into account benefits on the costs side and other, qualitative advantages from partnership action. It thus remains complex to quantify final success from interairline collaboration.

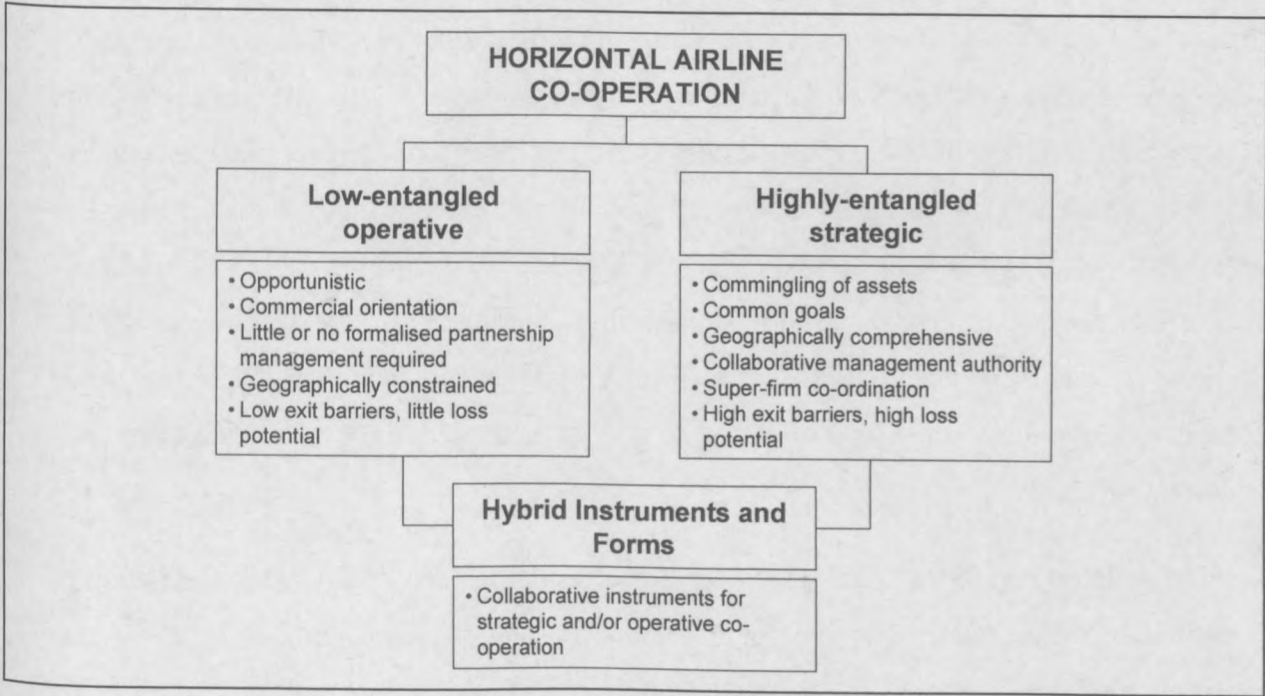
#### **4.4 Forms and Instruments of Interairline Co-operation**

The aforementioned different co-operational motivators, macro-economical competitive parameters and the regulatory environment (see 4.3.2) illustrate a fertile ground for airlines to co-operate in different forms. The exact definition of what constitutes an airline co-operation is vague, given the variety of continually changing institutional arrangements linking airline activities. In addition, airlines have over time built a complex web of interlocking collaborative arrangements covering various aspects of their business operation in different geographical areas. Interairline collaboration thus clearly cuts across distinct and exclusive agreements between a finite number of firms. They far more represent a net of different forms and instruments of co-operations, often indirectly linking carriers that are otherwise fierce competitors through specific collaboration.

The following section systemises these collaborative forms and instruments, using different criteria. However, it is not the purpose of this section to comprehensively scrutinise definitions of co-operation in the context of corporate strategies (for these, see e.g. Jäckel, 1991, pp. 22-36). An introductory, summarising systematisation of forms of co-operational airline agreements, is illustrated in the following figure.



Figure 4.5: Forms of Horizontal Interairline Co-operation



Source: own compilation

4.4.1 Low-entangled Operative Agreements

Operative airline collaborations require little institutionalisation and do not necessitate collaboration authorities in the form of management functions. Their principal orientation is to acquire supportive functions for selected value chain activities. Operative airline partnership agreements focus almost entirely on opportunistically exploiting joint sales and distribution activities. They are usually short- to medium-term oriented, however, many of the succeeding forms of collaboration have empirically shown a great temporal endurance.

4.4.1.1 Interline Agreements

The most recognised multilateral and operative airline agreements are interline agreements. They are commercial in orientation and partners stay very much at arm’s length. Interline arrangements provide for the participating airlines’ mutual acceptance of passenger tickets (subject to restrictions, endorsement requirements and additional collections according to the accepting carriers’ tariffs), baggage checks and baggage transfer, and cargo waybills as well as established uniform procedures in these areas (see United States General Accounting Office, 1995, p. 13). In addition, interline agreements allow tickets of one carrier to be sold through the distribution network of another carrier, or through associated distribution channels.

The original blueprint for interline agreements was established by IATA, but participating carriers need not necessarily be IATA members. Interline partners negotiate the agreements themselves, while IATA provides the necessary contracts, travel documents and accounting services, and facilitates the interlining process in its passenger tariff and service conferences (see Economic-Plus Limited GRA, Incorporated, 2000, p. 5). As financial demands emanate from interlining, IATA has introduced the IATA Clearing House, which deals with financial streams between carriers (for the legal position of the Clearing House see Reckwerth, 1993, pp. 176-183). Generally, every airline has multiple interlining agreements which, in turn, lead through various collaborative combinations to a wide network of these arrangements (see Schmidt, 1993, p. 105).

The IATA interline system has several principal benefits (see IATA, DG Competition Consultation Paper, 2001, p. 5, and for a detailed discussion of economical benefits, see Economic-Plus Limited GRA, Incorporated, 2000):

- Reduced transaction costs by simplifying administrative procedures
- Better and less expensive services for connecting passengers
- Flexibility, particularly for time-sensitive passengers
- The value of additional journeys (less the cost of providing for them) induced by an enhanced quality product
- The economies of density that result from these additional journeys<sup>69</sup>

Interline procedures mainly aim at providing maximum passenger convenience, and in the event of irregular operations, at getting the passenger to his or her destination as quickly as possible with the minimum of inconvenience, using the resources of all participants (see IATA, DG Competition Consultation Paper, 2001, p. 4). Interline agreements entitle passengers to purchase one ticket, even though various carriers provide transport services for a specific itinerary, covering several sectors. They increase the flexibility for passengers as long as the air ticket is interlineable, i.e. only IATA members or interline carriers participate. The fare for such a ticket is not calculated on the basis of the sum of each leg's fare (sector fare), but on the lower throughfare. Furthermore, passengers have a fare advantage as price depression caused by distance occurs. Using different carriers means the partaking airlines

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<sup>69</sup> This economic benefit arises because an increase in density of travel over part of the air network will enable larger and more economical aircraft to be utilised. This will reduce airline operating costs which will, depending upon the degree of competition in the marketplace, either enhance airline profits (add to the producer surplus) or reduce fares (which will add to consumer surplus) (see Economic-Plus Limited GRA, Incorporated, 2000, p. 6).



have to divide the revenue on a prorate basis. Prorate revenue allocation is generally based on the length of the travelled segments, with short-haul legs, however, receiving a proportionally higher cut of the revenue. For some airlines proviso-agreements have been negotiated. These entail that the proviso-carrier obtains an even higher share of the profit than according to the prorate basis (see Steininger, 1999, pp. 195-196).

Difficulties do occur when carriers do not accept a competitor's ticket for reasons that lie in their individual pricing and product strategy. Once a carrier defies an interline agreement with an airline which solely intends to enter a market, severe entry or extension barriers develop for the new entrant. A passenger travelling on the new entrant will not be able to purchase a supplemental add-on flight on the basis of the original ticket for the lower throughfare. As a trend towards individual pricing proliferates, and due to the increasingly shrinking influence of IATA as well as airlines' tendency to individually negotiate partnership agreements, one can expect interline agreements to lose significance.

#### 4.4.1.2 Prorate Agreements

Prorate agreements are a typical form of operative airline marketing agreements. One carrier agrees to sell capacity on a particular part of its network to another carrier for a previously accorded fare. Revenues that one airline will pay another for carrying the latter's ticketed passenger on a particular part of the former's network, will thus be fixed.

Prorate agreements often occur in the case of feed or dispersal services behind-gateways. International carriers servicing a country or region's main hub but, because of regulatory or commercial constraints, are not able to operate behind this gateway, often make use of prorate agreements to distribute their traffic. Prorate agreements entitle passengers to purchase flights to the desired destination, without being charged the accumulated single fares or sector fares. Additionally, prorate agreements allow airlines to acquire seat capacity more cost-effectively and thus to offer their passengers competitive throughfares.<sup>70</sup> Prorate agreements are therefore derivatives of interline agreements, but require more individually negotiated terms and are thus usually more beneficial for both the user and the provider of the air transport service.

Special prorate agreements (SPA) underlie collaborative agreements, but most often with codesharing pacts. With SPA, fares can be determined on routings operated multilaterally. SPAs often govern partnership pricing when there's an inability to jointly set fares, usually in

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<sup>70</sup> Throughfares are less than the sum of the fares of the separate legs.

cases where antitrust immunity is not granted. Under an SPA, each of the partnering carriers specifies the revenue it requires to carry a passenger along its section of an interline trip, which is, in turn, ticketed by the other carrier. The ticketing carrier then sets the overall fare for the trip, recognising that the required amount must be paid to the collaborating carrier. In contrast to simple prorate agreements, SPAs are the result of a more laborious bilateral negotiation process with an active, collaborative influence on the fare structure.

#### **4.4.1.3 Interchange and Blocked Space Agreements**

Interchange agreements are concessions between carriers to partly or fully charter seat capacity on certain routes to a partner. One can distinguish between the following forms of interchange agreements:

- On-behalf traffic: a carrier offers a service on certain routes on behalf of another carrier
- Limited charter: a carrier charts capacity for a limited period to or from another carrier
- Connecting plane or aircraft exchange agreements respectively: after having reached its final destination, a carrier charts its aircraft to a partnering carrier which offers a connecting service with its own crew
- Blocked space: a carrier - the marketing carrier - charts seat capacity from a partner - the operating carrier - on a longer-term basis

Blocked space agreements are certainly the most common and important form of operative agreements. Blocked seat spaces are usually sold to the partnering airline for a fixed amount. The marketing partner thereby takes the full capacity and distribution risk. This form of blocked space agreement is generally referred to as “hard blocks”. “Soft blocks”, in contrast, describe the marketing carrier’s option to purchase seats in consignments. If the marketing carrier is unable to vend the seat capacity, it can be returned to the operating carrier. In this case, the distribution and capacity risk stays with the operating carrier, which usually charges higher consignment fares. South African Airways and Nigeria Airways had a joint business venture - a combination of on-behalf traffic and blocked space agreement - on SAA’s route from Johannesburg via Lagos to New York. Planes on the route were manned by an SAA flight crew, while on-board service was provided jointly by the two companies. Nigeria Airways was allowed to sell 109 seats out of the 330 on the flight. Blocked space collaborations are comparable to partial wet-lease agreements, although the agreements do not involve the entire aircraft seat capacity (see Beyhoff et al., 1995, p. 11). The vast majority of



blocked space agreements are point-specific. They are minor, targeted, operative affairs that usually generate few controversies.

#### **4.4.1.4 Pooling Agreements**

Pooling agreements are contractual understandings between two or more carriers to jointly serve one specific route. In most cases, they are the result of bilateral air service agreements between nations that only allow a duopolistic competition structure. Capacities, revenues and costs are split according to an agreed scheme. "Open pools" allow for revenue to be shared according to the supply situation (number of flights, and seat capacity) without any limitation on shared revenue. "Limited pools", however, introduce minimum shared revenue, or caps on shared revenue (see Pompl, 1998, p. 108 and for a discussion of pool definitions, see Reckewerth, 1993, pp. 248-249). Members of the pool co-ordinate their flight schedules and sell and accept partners' tickets.

The advantages of pooling agreements reside in the fact that load factors and frequencies of pooled flights can be increased. Through a joint publication of flights, the partnering airlines can additionally target new and wider passenger groups (see Schmidt, 1993, p. 113). However, the downside of pool agreements lies in the reduction of the involved airlines' freedom of action and in blunting any competitive tendencies within markets regulated by air service agreements.

Pool agreements have been prohibited for US airlines by US antitrust laws and were disallowed for traffic within the EU in 1988. The termination of pool agreements in major aviation markets has thus paved the way for other collaborative agreements.

#### **4.4.2 Highly-entangled Strategic Agreements**

Highly entangled strategic agreements focus on the commingling of airline assets. Their aim at the time of formation is more long-term with a comprehensive scope regarding the geographic expanse and business orientation. Strategic agreements are based on explicitly formulated common goals for which members conjointly strive. Section 4.4.2.1 discusses main forms of strategically oriented interairline partnerships.

##### **4.4.2.1 Strategic Airline Alliances**

Strategic alliances have become an increasingly popular concept to cover a broad spectrum of collaborative business arrangements. Over the last 10 years, there has been a frenzy of activity in interairline partnership formation, regularly called strategic alliances. Strategic alliances

can be described as “(...) voluntary agreements between firms involving exchange, sharing or co-development of products, technologies, or services. They can occur as a result of a wide range of motives and goals, take a variety of forms, and occur across vertical and horizontal boundaries” (Gulati, 1998, p. 293).

A strategic airline partnership or alliance generally includes the commingling of assets. The purpose of this distinction is to categorise a strategic alliance in circumstances, in which parts of each company - i.e. parts of the value chains - join to pursue a single set of business objectives. This contrasts with contracts, or other agreements established to fulfil dual objectives of the partaking companies. In this regard, commingled assets can be facilities, aircraft, capital or personnel (see N/A, *Airline Strategic Alliances: Definition and a Case for Caution*, 1993, p. 1). However, in antithesis to this definition, strategic alliances are not necessarily only constituted by commingling assets. Interdependence in pooling individual resources, or the reciprocal exchange of input and output factors also defines strategic alliances. Furthermore, strategic airline alliances, as organisational arrangements and operating policies, share administrative authorities and form social links between the partners involved (see Mak and Go, 1995, pp. 63-64).

Summarising the general theoretical explanations of strategic alliances from the preceding section, the definitions outline one fact: strategic alliance is a generic term for a host of forms of interairline partnerships. The further use of “strategic airline alliance” as a superordinate concept thus incorporates the following aspects:

- Economically independent but competitively interdependent airline partners
- Horizontal collaboration
- Equity investment or exchange, although below majority margin
- Existence of steering or co-ordinating collaborative authority
- Initial long-term orientation with market-oriented goals and corporate efficiency objectives
- High exit barriers, high loss potential, and risk of sunk costs

Strategic alliances are defined as the co-operation between two independent, but economically interdependent airlines, sharing the goal to achieve common competitive advantages. Competitive interdependence illustrates the specific relation between actual or potential competitors which consequently leads to a collaborative - horizontal - direction (see Lutz, 1993, p. 39). As part of the following discussion, only horizontal airline partnerships form



part of the definition of strategic airline alliances. In contrast to the general definition of strategic alliances above, it is not necessary to limit the co-operation to selected parts of the value chain. It is, however, questionable whether strategic alliances between firms that have a broad collaborative value chain orientation, can maintain their economical independence. Even close partnerships, like Northwest Airlines/KLM do not incorporate the entire value chain, thus leaving sufficient autonomy for the partners.

Capital linkages between airlines are not in conflict with the definition of strategic alliances. However, equity exchanges or investments must not enable one of the participants to gain a controlling stake in the partnering firm. The 20% equity stake the Swissair Group held in South African Airways until February 2002 thus constituted a strategic alliance.

Co-ordinated behaviour and common use of resources are used to gain or defend competitive advantages over others. This only can be achieved once a steering authority is established. Strategic alliances therefore constitute the existence of an alliance management or co-operating steering department. In a very intense case of co-operation without equity stakes, KLM and Northwest Airlines have a member on each other's board and dedicated alliance management functions (see Buyck, *The Reluctant Dutchess*, 2001).

Strategic airline alliances need to have a long-term orientation and collaborative agreements must serve a strategic corporate strategy. The strategic goal must be to achieve common benefits, which can be roughly divided into production, market and product goals accomplishing corporate efficiency, effectiveness and learning objectives (see Netzer, 1999, pp. 50-62 and above). Some transatlantic alliances underscore their commitment and long-term orientation by applying for antitrust immunity in the USA. This usually requires organisational, commercial and operational adjustments, which can involve a strategic re-orientation of the partaking airlines (for the Lufthansa-United Airline antitrust immunity, see Sacher, 1997).

While commingling of assets leads to a dependency or hostage situation, exiting a strategic partnership can be associated with high barriers. These might occur in the form of a general high loss potential as a result of leaving the collaboration, and/or sunk costs for assets that are irretrievably lost when departing the alliance.

The following describes some selected and significant strategic interairline partnerships.

#### 4.4.2.2 Franchise Agreements

Franchising has traditionally been a collaborative measure and strategic market extension tool in many industry sectors. Quick service food suppliers (e.g., McDonald's), the beverage industry (e.g., Coca-Cola Company) and clothing firms (e.g., Benetton), to name but a few, have used product or trademark franchises as well as business format franchises successfully on a global scale.

In aviation, franchising allows a carrier to diffuse its brand and generate revenues on thin routes without necessarily committing major capital investments. Airlines ideally functioning as franchisees are regional carriers, serving markets that are usually too unprofitable for incumbents to enter or to penetrate. Industry development makes it imperative that carriers funnel as much regional traffic as possible into their service networks, while the regional carriers' limited resources make it difficult, if not impossible, for them to grow internally. Strength-weakness profiles of franchisor and franchisee are thus usually complementary.

The established carrier brings a brand and a strong international network, usually through size and scope, into the collaborative agreement. The franchisee serves regional and/or domestic routes at lower operating costs. Instead of developing or protecting a share by entering the regional carrier's market and engaging in predatory pricing, thereby destroying or severely weakening the regional carrier and gaining a market which it cannot profitably or adequately serve, the franchisor takes advantage of the regional carrier's twin competitive advantages, namely size and its intimate knowledge of the niche market it serves.

In practice, one airline - usually an incumbent carrier - would permit another carrier to use its name, aircraft livery, uniforms, service concept and brand image. Externally, the franchisee would adopt the product or brand appearance of the franchisor completely, thus contributing to significant branding effects. The incumbent carrier would sell these privileges to its collaborative partner, often as part of a package in which the franchisor undertakes the overall franchisee's marketing, sales management, revenue and yield management. In return, the franchisee pays franchise and royalty fees, also in the form of other charges for supplementary services like revenue accounting, departure control systems or various IT and consultancy assistance. In fact, the franchisee bears all of the operating costs involved in the franchise - repainting aircraft, purchase of crew and customer service uniforms plus the cost of any cosmetic changes needed to aircraft cabins and the corporate appearance. It is these aspects which explain why franchise agreements can be described as licensing agreements, as the



franchisee usually buys a licence to use the franchisor's intellectual property (see Moorman, 1998, p. 121). Besides branding effects, additional scale and network density and benefits through the franchisee's feeder services, give the franchisor immediate revenues from these financial charges.

The franchisee's benefits, apart from traffic increase, stem from the adoption of a usually superior brand, marketing mix provision, including FFP participation and assistance, as well as the possibility to operate interline, rather than online. Interline traffic however, is only likely once codeshare agreements are established, or if the franchisee gives up its own designator code for the benefit of the franchisor's code. Sharing a code with a global player gives the franchisee a particular credibility in the travelling community and equips it with a certain prominence in CRSs. In addition, growth potential surfaces through franchise agreements. By exclusively providing feed to the incumbent's network, the franchisee can reach a critical mass and operate more cost-effectively and thus stronger in its home market.

In order for the franchisor to exert control over the continuity of the franchise quality, regular audits and compliance checks are conducted. These checks include areas such as procurement, management and organisation, personnel and training, procedures and manuals, branding issues, service standards, security and safety, airworthiness, ground operations, technical standards and engineering, as well as marketing and distribution. They thus cover the entire value chain that needs to be in compliance with a catalogue of requirements laid out by the franchisor. In addition, the franchisor demands that no alterations are made to the franchisee's organisation, financial and asset structure, its business strategy and development, as well as networking strategy, without prior approval. Contravention of compliance checks and contractual resolutions would ultimately lead to a cancellation of the franchise agreement. To increase the influence on the franchisee's production process, the franchisor usually trains franchisee's staff in areas like safety and security, customer service, engineering and airworthiness issues.

The first franchise in the airline industry was concluded in 1967 by Henson Aviation as a franchisee of Allegheny Airlines, a predecessor of USAirways. Allegheny developed the "Allegheny Commuter System" as a franchise operation to serve routes they were not able to operate themselves (see Steininger, 1999, p. 290). Franchising is now a form of collaboration that is growing in popularity in international markets, especially in Europe where British Airways has been successful in developing agreements. Starting its franchise activity in 1993 with CityFlyer Express (since 1999 a wholly owned subsidiary of British Airways),

franchising produced an initial win-win situation. CityFlyer quadrupled the size of its operation and posted significant pre tax profits in the first 5 years of its franchise agreement with BA (see Moorman, 1998, p. 121).

In 1996, South Africa's Comair became British Airways' first franchise partner in Africa and the first to serve and feed a market other than British Airways' core home market. Although Comair initially remained a private company, distinct from British Airways, it traded in its livery and commercial independence for British Airways' flight codes, CRS, sales promotion and FFP, which helped to increase its ridership and strengthen its competitive position against the incumbent South African Airways. In return, it fed British Airways' international network with passengers from other Southern African regions, mainly through Johannesburg International Airport.

The positive outcome of the first foray into the franchise market convinced British Airways to pursue an aggressive franchise strategy, which now incorporates 12 franchise partners with regional or feeder operators in Europe, Africa and the Middle East and, in August 2001, serving close to 120 additional destinations (see N/A, British Airways' Extended Network, 2001).

The downside of franchising primarily lies in dependency, branding effects and costs. With the franchisor effectively controlling the franchisee's entire operation through contractually determined audits, compliance checks and various other obligations, the franchisee loses a significant part of its economic autonomy. The augmented execution of control on the franchisee has repeatedly been expressed by franchisor airlines either fully integrating franchisees (e.g., CityFlyer), or taking stakes in their collaborative partners (e.g., Comair). What used to be the virtue of small regional carriers, namely being capable of making and implementing decisions quickly, might be lost through the approval process of the franchisor.

A further frailty of franchise agreements is the possible loss of the franchisee's original brand name and value. In the case of Comair in South Africa, the franchisee is operating under "British Airways operated by Comair", however the original brand name is lost, as it no longer has any unique brand features for the travelling public. In the event of a termination of the franchise agreement, this would imply that Comair would either have to try and revive the old brand, or establish an entirely new brand identity. The costs of the franchise that has to be born by the franchisee must be taken into consideration and might jeopardise the expected increase in revenue of the franchisor. As already mentioned, franchise fees and royalties need



to be paid to the franchisor as well as initial standardisation costs which need to be laid out. These have to be covered at the outset of the collaborative partnership as well as during the entire franchise operation.

On the other hand, the franchisor's brand image can be negatively influenced by the franchisee. The above-mentioned branding advantages could be diluted or destroyed if a franchisee does not fully live up to the franchisor's standards. The latter situation generally emanates from the situation that the passenger purchases a service which has been produced by the franchisee, but which is marketed under the franchisor's brand name. Compliance checks and audits try to avoid this situation, but the potential of negative brand effects remains.

#### **4.4.2.3 Multilateral Partnerships/Networks/Blocks of Airlines**

A global carrier alliance network is formed by a group of affiliated airlines with complementary route structures capable of providing service to most of the large and medium-sized cities around the world, particularly in North America, Europe and Asia (see Oum et al., 1993, p. 15). Carriers partnering in a network can consequently build a strategic group or block of collaborating firms (for an in-depth discussion of the concept of strategic groups in aviation, see Albach, 1991, pp. 665-666 and Piepelow, 1997).

Airline networks need not necessarily be of strategic orientation, since they could be loose forms of horizontally collaborating carriers. However, also with regard to the specific airline networks to be described below, a strategic, highly-entangled focus can be assumed. In accordance with the network theories described above, these airline networks are specific forms of strategic networks, as they bring firms that are highly symmetric in terms of their value chain, scope and resource commitment, and follow a similar strategic orientation, together within an industry. Assets are regularly commingled and the partners endeavour to find a common, explicitly formulated goal. Managerial functions are not carried out on an ad hoc basis, but in structured managerial organisations to which each member contributes. Exit barriers can be high and occur in the form of sunk costs emerging with the departure from the alliance.

A global network or strategic airline group can collect or feed traffic from many points throughout the world, channel that traffic onto its long-haul trunk routes and distribute it through collection and dispersion systems on other continents (see Oum et al., 1993, p. 15). Regional networks provide transportation within the airlines' home regions and feed traffic to

the airlines' international gateways (see Golaszewski et al., 1995, p. 1). The combination of those two collaborative systems is effective for partnerships, because it allows quasi online, seamless service between a variety of domestic and international points, taking advantage of the multi-hub structure of its members. The particular size and scope of a route network contributing to a collaboration is a unique resource, which makes an airline an attractive partner for a multilateral group and gives it a strong position among its allies.<sup>71</sup>

The following section introduces the major global networks, their managerial and strategic implications and their main collaborative tools.

#### **4.4.2.3.1 The Global Groupings**

Today's global airline networks are not anonymous groups of carriers containing a vast range of collaborative agreements, but branded structures of allies. In order to capitalise on marketing effects, airline groupings have given their co-operations well-publicised brand names. As a main marketing objective is to offer seamless passenger travel and to operate as uniformly as possible, e.g. towards travel agents, organisations and passengers, airline networks increasingly use umbrella brand concepts. It is believed that maximum benefits to be realised from alliances occur when the grouping acts as a single company, which can be at least partly achieved by common branding (see Berardino and Frankel, 1998, p. 83).


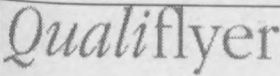

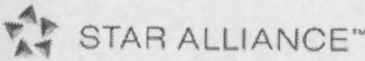
Despite their initial concept of establishing dominant superbrands at the expense of the members' individual brands, networks have chosen dual branding strategies. While the networks are globally promoted under the umbrella brand, the individual airlines' brands sustain their customer appeal. The overview below introduces the most important and biggest brands of global carrier networks and their member composition.

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<sup>71</sup> The network around Air France and Delta Air Lines is exemplary, based on the key resources of Atlanta Hatfield Airport, which is the largest hub in the world, and France, as one of the most attractive tourism destinations in Europe.



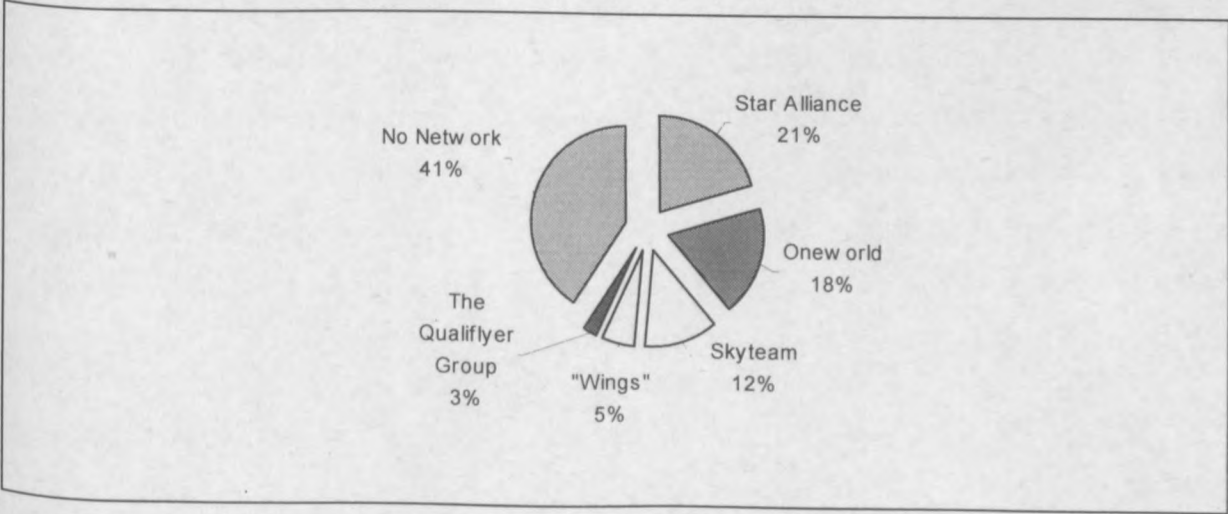
Table 4.4: Global Airline Networks - Members as of February 2002 and Launch Dates

<b>"Wings" - KLM/Northwest</b>	<b>Core Members:</b> Northwest Airlines, KLM Royal Dutch Airlines, Malaysia Airlines. <b>Associated Carriers</b> <sup>1</sup> : Transavia, Kenya Airways (both KLM stake). <b>Launched in 1990</b> as a bilateral partnership between KLM and Northwest Airlines.
	<b>Core Members:</b> Aer Lingus, American Airlines, British Airways, Cathay Pacific, Finnair, Iberia, LanChile, Qantas. <b>Associated Carriers:</b> TWA, 23 regional Affiliates. <b>Launched in 1998.</b>
	<b>Core Members:</b> Air Europe, Air Liberté, Air Littoral, Crossair, DAT Delta, LOT Polish Airlines, PGA Portugália Airlines, Swissair, TAP Air Portugal, Turkish Airlines, Volare Airlines. <b>Launched in 1998.</b> <sup>2</sup>
	<b>Core Members:</b> Aeromexico, Air France, Alitalia, CSA Czech Airlines, Delta Air Lines, Korean Air Lines. <b>Associated Carriers:</b> Air France Stake in African Carriers, Aeroflot. <b>Launched in 1999.</b>
	<b>Core Members:</b> Air Canada, Air New Zealand, All Nippon Airways, Ansett Australia, Austrian Airlines, British Midland, Lauda-Air, Lufthansa, Mexicana, SAS, Singapore Airlines, Thai Airways, Tyrolean, United Airlines, Varig Brasil. <sup>3</sup> <b>Associated Carriers:</b> Virgin Atlantic (Singapore Airlines stake), Spanair (SAS/United Airlines), Braathens (SAS, still to be completed). <b>Launched in 1997.</b>
<p><sup>1</sup> Associated Carriers have equity or other close links to at least one of the core partners, but which are not closely tied to another alliance.</p> <p><sup>2</sup> Qualiflyer is the successor of the European Quality Alliance (EQA) which was formed in 1990 by Swissair, Austrian Airlines, SAS, and Finnair, and Atlantic Excellence, launched in 1997 and including Austrian Airlines, Sabena, Delta Air Lines. Atlantic Excellence, which in turn succeeded the Global Excellence Alliance after Singapore Airline's exit in 1997, was officially disbanded in August 2000 due to Delta's ties with Air France. Its future is at stake with the bankruptcies of both Swissair and Sabena in late 2001.</p> <p><sup>3</sup> Ansett Australia went out of business in late 2001; Lauda-Air and Tyrolean are part of Austrian Airlines Group.</p>	

Source: misc. airline information

To visualise the size of the above-mentioned networks, the following pie chart shows their respective ASK.

Figure 4.6: Distribution of Global ASK by Airline Network, 2002



Source: N/A, Airinfo Alliance: General, 2002

The five contenders in the field of global airline groupings represent close to 60% of the overall world passenger transport market. Star Alliance is presently the largest network with a share of more than 20% of the world's ASK. The network groupings have been relatively stable for the greatest part of 2000 and 2001, however, shifts occurred in late 2001 and are expected in the near future as well. With the events of September 11<sup>th</sup>, 2001 having had a drastic impact on global aviation, network building went on hold from late 2001 until the beginning of 2002. The future of the Qualiflyer Group is unclear and largely depends on the strategic orientation of Swissair's successor airline. However, in the light of a recovery of global air transport markets, a new impetus is to be expected in extending the scope of the more powerful groupings.

To evaluate alliance groupings based on other than size and ASK shape, Merrill Lynch has developed a benchmark. The so-called Merrill Lynch Alliance Index is based on the following evaluation criteria (see Merrill Lynch, Pierce, Fenner & Smith Inc., 1999, Merrill Lynch & Co., 2000 and Winch, 1998, p. 20):

- Geographical network including: number of destinations, number of unduplicated route kilometres, number of departures, ASK, and kilometres flown
- Market size including: passenger revenue, number of passengers, and RPK
- Network density including: passenger revenue per unduplicated route kilometres, RPK per unduplicated route kilometre, and number of departures per destination
- Financial strength including: pre tax margin, and debt as per cent of capital
- Regulatory freedom: includes the number of open skies agreements in the multilateral network

The index describes individually chosen, yet objectively measurable parameters to generally evaluate airline alliance groupings. Important parameters are those relating to network size and scope. As revealed above, the primary motivation for the formation of multilateral airline groupings is the expansion of traffic reach, which can best be achieved by aligning carriers from different regions under one umbrella brand. Based on a scoring system, the index ranks the relative strength of the groupings. In the 2000 survey, Star Alliance lead the five-strong group of carrier networks in the index (see Merrill Lynch & Co., 2000).



#### 4.4.2.3.2 Current and Future Network Configuration Characteristics

In accordance with the theoretical explanations of networks above, the set-up of multilateral airline partnerships follows two distinct forms, which reflect the scholarly concept of hub firms or strategic centres.

- Type 1: One mega-carrier or larger carrier creates an alliance network by allying with several junior partners in each of the other continents. The senior partner is responsible for network policy and co-ordination, including CRS, pricing, and capacity decisions, provides much of the long-haul international services and operates major hub airports in the network.
- Type 2: An alliance among large senior partners, one from each continent, supplemented by regional feeder carriers within the continents as junior partners. The senior partner is responsible for efficient network operations within the continent itself, including the operation of continental hubs (see Oum et al., 1993, p. 18).

Undoubtedly, Qualiflyer, through its organisation around Swissair, was a Type 1 network. Swissair cannot be regarded as a mega-carrier, although it was significantly larger than its partners in the multilateral partnership.<sup>72</sup> Besides being responsible for much of the intercontinental traffic, Swissair had long been in charge of the provision of ground handling and other support services (catering and IT) for the entire network. Swissair's parent Swissair Group has, however, already, or is in the process of divesting from these functions. Qualiflyer is essentially a European grouping, with Swissair having lost its US American and Asian partners, when long-standing allies Singapore Airline and Delta Air Lines joined other networks. The grouping has experienced a major setback with founding member Austrian Airlines leaving to connect to Star Alliance in 1999. Qualiflyer has not been able to attract any new members and is considered to be a candidate for integration into another network. With the bankruptcies of both Swissair and Sabena, the strategic re-organisation of the former and the loss of some smaller regional carriers in late 2001, the future of Qualiflyer must be regarded with reasonable scepticism. Presently, Qualiflyer is mainly a linkage of carriers held together by the common FFP programme; strategic development has been reduced to a minimum. As Swissair has close ties to American Airlines, Oneworld could be a prospective new partner, marking the end of the Qualiflyer Grouping.

<sup>72</sup> Swissair's revenue in 1999 was USD 8,684 billion as opposed to the USD 1,288 billion of Turkish Airlines and USD 1,149 billion of TAP Air Portugal, which are the second and third largest partners in the partnership (see O'Toole et al., 2000, pp. 68-72).

Star Alliance is a typical Type 2 network. Star started with a group of 5 carriers (Lufthansa, United Airline, SAS, Thai Airways and Air Canada) and has grown to a 15-member strong grouping without having lost a single participant. Due to its maturity, and its lead in setting up the multilateral partnership, Star has managed to cover every continent with a traffic network provided by at least one of the indigenous and dominating continental or regional carriers. Major exceptions in coverage are, however, Russia and the former Soviet Republics and China, with Star working intensively to line up the necessary carriers for entry. With the exception of Thai Airways and Singapore Airlines, the partners' route networks complement one another. Senior partners in the collaboration have one or more continental hubs with a solid traffic base, which already serve as, or have the potential to be developed as international gateways. Collaborations with regional carriers, e.g. Lufthansa's Team Lufthansa, supplement hub feed with local or regional traffic.<sup>73</sup>

Oneworld is a Type 2 airline network. It is made up of the world's largest and most prestigious airlines. Oneworld, however, lacks reach in Asia and, compared to Star, in Oceania. It nevertheless gained ground in Australasia with Star member Ansett Australia going out of business in late 2001 and Qantas now pursuing regional expansion strategies. In general, Oneworld has been held back by the inability of its core members, British Airways and American Airlines, to gain US antitrust immunity for their traffic across the North Atlantic. As the bilateral partnership is not perceived to offer sufficient customer benefits to offset potential reduction in competition, the exemption from antitrust laws has not been granted. The process is additionally pending, because a decision demanded by the European Commission Directorate regarding British Airways' slots at London Heathrow, could not be reached. A positive outcome of antitrust negotiations would be welcomed, as this would also pave the way to an open skies agreement between the UK and the USA. In a singular attempt to expand the partnership, British Airways entered into merger talks with KLM in 2000, which were called off after several month of negotiations. As the entire grouping hinges on the unresolved relationship between British Airways and American Airlines, ties between its partners are not very strong and further changes in the composition are to be expected.

Skyteam, another Type 2 network, has achieved a critical resource input by recruiting Alitalia and Korean Air Lines as members. The US and French governments reached an agreement on

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<sup>73</sup> Lufthansa Team is an association of largely independent, although closely co-operating local and regional carriers such as Augsburg Airways, Cimber Air, Cirrus Airlines, Contact Air and Rheintalflug. They operate in a franchise manner for Lufthansa (see N/A, Team Partners, 2001).

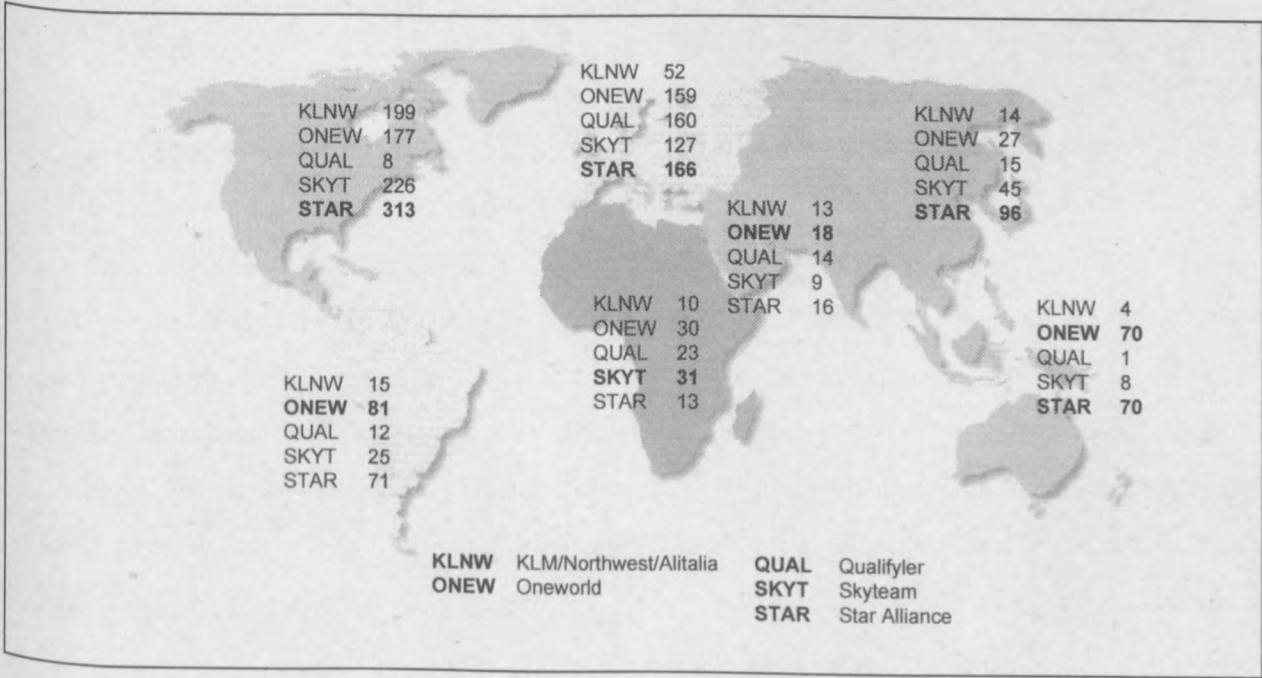


open skies in October 2001, which was a precursor to gaining US antitrust immunity from the USA for the partners Air France and Delta Air Lines in December 2001. The accord will spur the pace of Franco-American air transport development. However, Skyteam still has to attain reach in most parts of Asia, Oceania and South America as well as on the US West Coast.

KLM and Northwest's collaboration with the tentative name Wings, is based on the long-standing, highly integrated bilateral relationship between the two core carriers. They gained US antitrust immunity in 1992 and account for more than 80% of the network's traffic (see Baker, *The Global Groupings*, 2001, p. 42). In its basic structure it is a Type 2 network, although lacking feed from affiliated regional carriers. The network has significant comparative weaknesses in all regions but the Middle East and North America. A virtual merger between Alitalia and KLM in 1998 was expected to ease the situation in Europe. However, KLM withdrew from the deal in early 2000 due to mismanagement in establishing Milan Malpensa as a hub airport and uncertainties about Alitalia's privatisation.

In summary, figure 4.7 illustrates the geographic characteristics by numbers of destinations of the large multilateral airline networks in respect of the world's continents and continental regions.

Figure 4.7: Destinations Served by Network and Region in February 2002



Source: N/A, Airinfo Alliance: Destinations, 2002

Other than the typological classification and the geographic reach of networks, there are certain other characteristics of the airline networks' membership configuration. First mover

advantages seem to be crucial in the establishment of successful networks and had been foreseen quite a number of years before the establishment of the first significant multilateral partnership (see Oum et al., 1993, p. 19). Star Alliance's early and strategically, as well as regionally balanced collaborative strategy gave it a sustainable lead in reach over its competitors (see figure 4.7).

Given the size of the North American market, having a US carrier among its members is claimed to be a configurational pre-condition for a successful global network. Consequently, the total number of global networks might be determined by the number of large, globally operating carriers in the USA. In this case and under the current regulatory legacy, US carriers will retain their hubs and current domestic networks.

The same applies to the Asian market. The sheer size of the Asian air transport market, in which China is one of the key growth areas (for growth in the Chinese market, see chapter 2), supports the contention that the services of an Asian carrier are essential for the establishment of a successful network. A shift in forces in the Asian market can also be expected. Thai Airways has been upset by the entry of Singapore Airlines into Star Alliance. Being in the process of privatisation and strategically discontent with Star's membership structure, it is likely that Thai will enter some other network in the near future.

After a phase of analysing the concept of global groupings, identifying prospective partners, which were subsequently collected and sometimes changed among networks, multilateral groups of the above kind are far from being stable constructions. There has never been much turbulence in multilateral partnership composition, but the multilateral network scene is still in a state of flux. While one can view the fewer changes in alliances structures as indicating increasing stability, networks can be regarded as inherently open-ended and ever-changing by nature. Cyclical developments, such as the aviation crisis in 2001, will continuously impact on the composition of multilateral partnerships. The regulatory environment will most certainly confirm an inherent instability. Once consolidation of airlines is widely legally accepted, the basic task of global groupings will shift to concentration. This is why greater stabilisation of airline groupings could be marking the prelude to a fundamental reshaping of alliance strategy in the form of consolidation.

#### **4.4.2.4 Equity Alliances**

Airline equity partnerships involve the purchase of stock and equity, either uni- or multilaterally and reciprocally, in one or multiple carriers. Per definition, they thus potentially



pertain to the collaborative agreements of concentration, although they can also be part of strategic alliances if minority shareholdings exist. They suggest a more long-term commitment between carriers, allow for some, or majority, control and influence over a partnering carrier's planning decisions and its entrepreneurial destiny. While financial linkages do not consequently lead to commercial advantages merely based on investment considerations, airline equity partnerships also include the entire spectrum of integrative and collaborative measures, such as codesharing, marketing agreements, technical co-operation, outsourcing provision and vertical and horizontal disintegration, to name but a few. It is these other forms of collaboration among the value chain scope that motivate many equity collaborations. The execution of control through equity linkages plays a central role and is often used to influence a carrier's decisions with regard to its suppliers, IT systems or other service and product providers.

Capital linkages in domestic markets have long been exercised, although cross-border equity partnerships are a less common feature in the airline industry. One of the first partnerships that involved the exchange of equity across the Atlantic was the alliance between British Airways and USAir. In 1993, British Airways' USD 400 million infusion into USAir was granted immunity from antitrust laws by the US Department of Transportation. British Airways held a 24,6% stake and 3 seats on USAir's 16-member board of directors. The share could optionally be increased to 40,7% though, with voting rights limited to 25%, as restricted by United States airline ownership laws. Furthermore, it was preconditioned that the control of the airline was exercised by US citizens (see United States General Accounting Office, 1995, p. 32). Although USAir's main benefit from the alliance was the investment - capital that was critical to the viability of the financially struggling airline - USAir also benefited from some added revenues, due to other collaborative instruments, increased interline traffic, FFP links with British Airways and wet leasing of three aircraft to British Airways for transatlantic operations. However, the financial involvement of British Airways in USAir was terminated in 1997 mainly because of the partnership's unsatisfactory results and British Airways' newly formed alliance with American Airlines (see Doganis, 2001, p. 63).

The equity partnership between KLM and Northwest Airlines, which started in 1989 with KLM buying a 20%, USD 400 million stake in the American carrier, also did not last. Difficulties with two private shareholders over the governance structure of Northwest, finally lead to the termination of the equity binds between the carriers in 1997 (see Tully, 1996). KLM consented to resell its stake to Northwest over a period of three years. The carriers will

then hold just one seat on each other's boards, compared to the past three (see Nuutinen, 1997, p. 9 and Buyck, *The Reluctant Dutchess*, 2001).

Other well-publicised equity partnerships were, for example, Swissair's capital linkages with some European carriers, of which the link to Belgium's Sabena could be considered the closest, managerially as well as financially (49,5%).<sup>74</sup> In addition, Swissair Group held a 20% stake in South African Airways, which was bought back by the South African Government in February 2002.

The stake in South African Airways, as well as the 26% share KLM holds in Kenya Airways are both shareholdings that the African governments requested as part of the privatisation process of their national carriers (see Buyck, *The Reluctant Dutchess*, 2001). Lufthansa has often strongly opposed equity partnerships as a form of collaboration and the required glue for collaborative agreements. It has, however, formed a variety of minority financial linkages with its partners, most markedly a 20% stake in its Star Alliance partner, British Midland, in 2000 (for a comprehensive overview of airline equity partnerships, see Ombelet, *Airline Alliance Survey 2001*, 2001).

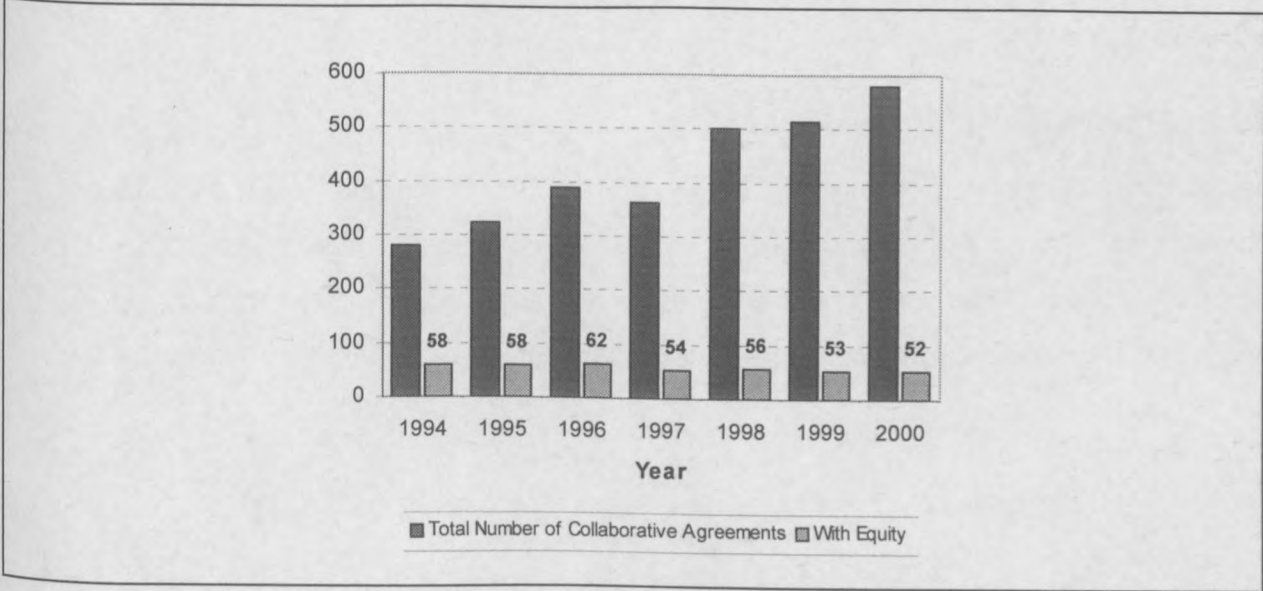
In the theoretical definition of strategic alliances, equity partnerships are often seen as a *conditio sine qua non* for the success of partnerships. Empirical studies of the earlier airline partnerships indicated a higher success rate for closer equity collaborations (see Lindquist, 1996, p. 12). For contemporary airlines, however, it seems that a successful partnership does not necessarily need equity exchange (also see Nuutinen, 1997, p. 9). Cross-border financial linkages or those outside integration regions especially occur to a lesser extent. If nothing else, evidence proves the decreasing significance of airline equity partnerships in comparison to the overall number of collaborative agreements.

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<sup>74</sup> Swissair Group had established a strategy of distributing its own services and products (e.g. IT, catering, and ground handling) through Swissair's stakes in other airlines. However, both Swissair and Sabena went into liquidation with Sabena disappearing as an individual brand and Swissair being revived by a bank consortium in late 2001.



Figure 4.8: Total Number of Equity Partnerships



Source: Wood and Gallacher, 1998, p. 43, Gallacher, Partners for now, 1997, p. 26, O'Toole, The major Airline Alliance Groupings, 1999, p. 36, O'Toole and Walker, 2000, p. 46

Reasons for the above trend can lie in the financial situation of airlines generally, as well as the bilateral traffic right structure and national ownership clauses. Airlines easily fall victim to global cyclical business developments and other highly publicised events and are thus predisposed to little profitability or even market exits. This sensitivity makes them comparably unattractive for capital markets and funds from within the airline industry. With regards to cementing an alliance by means of getting involved in highly-entangled equity partnerships, the above-mentioned examples of failed attempts have also lead to a certain reluctance to execute financial infusions - at least on a global scale. It is simply not sufficiently proven that equity partnerships lead to more stable alliance relationships and that governance power of the airline investor can be executed to a satisfactory extent. In addition, national ownership clauses and ownership restrictions in air service agreements make it difficult, if not impossible, for carriers to enter into horizontal majority equity partnerships.

4.4.3 Hybrid Partnership Instruments and Forms

The above-described forms of airline partnerships are generally attributable to either high- or low-entangled partnerships. These forms, however, make use of instruments to operationalise their partnerships of which some - e.g. codesharing, FFP collaboration - have already been mentioned. In turn, partnership instruments can be stand-alone airline collaborative configurations as well, e.g., a route specific codeshare partnership, geographically confined or a marketing collaboration. They thus occur in a hybrid pattern, both between operative and

strategic alliances and being instruments to the former, or by existing as independent partnership forms.

#### **4.4.3.1 Marketing and Distribution Alliances**

Marketing or distribution alliances exemplify hybrid instrumental and formal collaborative orientations. They usually incorporate a variety of collaborative instruments under the umbrella of distinct partnership forms and focus on particular sections of the value chain. Marketing alliances usually comprise the following instruments:

- Codesharing
- Sharing of designated routes under bilateral aviation agreements
- Joint or distinct feeder services
- Cross-participation in partner's FFP
- Collaborative advertising and promotion
- Sharing of sales offices, General Sales Agencies (GSA) and call centres
- Joint electronic distribution methods
- Shared or co-ordinated product design (inflight/ground, interior/exterior)
- Sharing of airport facilities in the partner's markets

Marketing collaborative agreements are thus a generic term under which a diversity of primarily distribution-focused measures falls. Whether a marketing alliance has an operative or strategic orientation must, in contrast to some other theories, be determined by its scope and the depth of its integration within the operation of participating carriers. Sharing of sales offices and joint FFPs can, for example, have strategic implications, once commingling of value-adding activities applies (for different types of FFP collaboration see Petersen, 1997). In this case, per definition, the partnership could be considered strategic. If, however, the spatial dimension of a marketing partnership is either limited or differs between the partners - e.g. a large carrier having a GSA agreement with its smaller partner in the latter's home market - the perceived or intended business orientation of such an understanding can strongly contrast.

The following introduces some of the most prevalent interairline distribution agreements.

##### **4.4.3.1.1 Computer Reservation System/Global Distribution System Collaboration**

As described earlier, it has been a core necessity for airlines to distribute their products to the travelling public via the travel trade through CRSs. The possibility of two-way, 24 hour and



basically global communication with trade intermediaries have made CRSs the most valuable distribution tool for passenger carriers. It is for this strategic importance, also in the sense of market intelligence they generate, why airlines initially developed and kept control of these channels.

Development, hosting, maintenance and distribution of the systems themselves have and still do require substantial funds and know-how resources. Traditionally, airlines have formed partnerships in the establishment of three of the four most significant CRSs, namely Galileo, Worldspan and Amadeus,<sup>75</sup> which made them virtual hosts and co-hosts at the same time.

Carriers tried to design CRSs to best serve their individual distribution needs, which also motivated their lasting control of these channels. One of the collaborative goals in setting up CRSs was the immensity of financial resources required in building and maintaining world-spanning communicational computer systems. In joining forces with a number of other carriers, funds could be raised and a critical initial mass for the usage of these systems could be assured. In distributing CRSs to other clients, namely other co-hosts and subscribers/users, CRS partnerships have aimed at building oligopoly power, also in establishing standards for the electronic distribution of travel-related products.

Carriers are, however, in the process of divesting from their CRS shares. Regulation and competition authorities have eyed CRSs for a long time, in particular banning a biased display of those carriers that are shareholders of the systems. The sophistication of CRSs has increased, migrating from pure host-to-subscriber distribution systems to integrated IT tools with back-office functions. In particular the integration with other IT and communication systems, especially the Internet, has forced CRSs to more adequately meet the challenges of individualised travel distribution and purchasing processes. The complexity and inability to reap premium rents from the ownership of CRSs have motivated carriers to decrease their involvement. American Airlines sold its shares in Sabre in 2000 and some other airlines have also divested from Galileo (see Global Aviation Associates, 2001, pp. 34-35).

In the wake of forming global airline groupings, however, another form of CRS partnership has surfaced - namely that of CRS commonality. For the best usage of booking and communication facilities, CRSs in global airline groupings should best be common. CRS commonality in multilateral partnerships is, nevertheless, far from being established. While

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<sup>75</sup> Sabre was owned by US carrier American Airlines. For the shareholding structure, see above.

British Airways and American Airlines are the founding members of Oneworld, they still both operate their individual CRSs - British Airways using Amadeus and American Airlines utilising Sabre. The same applies to the members of the Star Alliance, which have not opted yet for the common employment of one system. With airlines withdrawing from their financial involvement in CRSs, the next step in being partners in CRSs will thus be the usage of common reservation systems.

#### **4.4.3.1.2 Online Distribution Collaboration**

Online air transport product distribution systems are genuine solutions to bring the customer the highly valuable and perishable commodity on which real time information can be made available electronically. Airlines use different online tools to distribute their products business-to-consumer (B2C); these were described above. In order to capitalise on size and scope effects, knowledge advantages, bargaining power in respect of the travel trade and reaping savings potential from dis-intermediation, airlines have repeatedly pooled their forces when establishing Internet-based distribution facilities.

One firm, Orbitz ([www.orbitz.com](http://www.orbitz.com)), has triggered intense scrutiny by US competition authorities, mainly due to the fact that it is jointly owned by American Airlines, United Airlines, Continental Airlines, Delta Air Lines and Northwest Airlines. Competition authorities and consumer advocates saw a market-dominating power in the joint venture of the mentioned carriers, allowing them biased online distribution of specially discounted fares (see, e.g., United States General Accounting Office, Testimony of Jeffrey G. Katz, 2000 and N/A, Consumer Groups Come out against Airlines' Orbitz Project, 2001). Orbitz is dedicated to taking shares from the dominant US online agencies, namely Microsoft's Expedia ([www.expedia.com](http://www.expedia.com)) and CRS Sabre-owned Travelocity ([www.travelocity.com](http://www.travelocity.com)) and thus aims at reintegrating online sales capabilities into the airlines' core businesses. The European equivalent to Orbitz is Opodo ([www.opodo.com](http://www.opodo.com)), created by Aer Lingus, Air France, Alitalia, Austrian Airlines, British Airways, Finnair, Iberia, KLM and Lufthansa. Opodo was launched in late 2001 after repeatedly having postponed the starting date.

Both multilateral online travel portals claim to address the traveller's needs by offering unbiased online travel services with low and flexible fares. As customers want to be able to compare and buy offers from a wide range of airlines by visiting just one site, the two portals maintain that they offer a comprehensive choice of airlines and their destination as well as linked tourism services (see Grobбен and Buyck, 2001, p. 8). The question raised by



consumer advocates and competition authorities, however, is whether the collaborating airlines truly manage to display an extensive scope of travel offers in an unbiased manner. The possibility of influencing the passenger's choice towards products of one of the owning airlines' products would make sense.

The only multilateral umbrella brand partnership also functioning as an online travel portal is Oneworld ([www.oneworld.com](http://www.oneworld.com)). The website clarifies that merely the member carriers' products can be purchased. Other multilateral partnership Internet sites do allow for the possibility of online bookings, although link or refer to the allied carriers' individual sites.<sup>76</sup>

The collaborative composition of Opodo and Orbitz points out one peculiarity. Each of the joint business ventures brings together core members of the competing global alliance groupings. What is postulated as being advantageous for member carriers in blocks of airlines, namely the far-reaching benefits from a global grouping, does not seem to work for electronic distribution channels. While Opodo initially focused on central Europe, Orbitz also does not want to step beyond USA borders in the first years of its operation. The competitive necessity to offer online travel service distribution is a regional phenomenon, which consequently interferes with the concept of global blocks of carriers. Further developments of the Internet and global availability of online services on a larger scale will show whether the regional online portals will endure or whether multilateral groupings will manage to sell products using their particular umbrella brand or superbrand concepts.

#### 4.4.3.2 Codeshare Partnerships

Codesharing is probably the most widely described form of interairline co-operation and has been scrutinised in detail by scholars, as well as regulatory and competition authorities and practitioners. Since first appearing in the US domestic market in 1967 and internationally in 1985, in an agreement between American Airlines and Qantas, codesharing has been the fastest growing type of collaboration with about 70 new arrangements concluded each year between 1998 and 2000<sup>77</sup> (see Beyhoff et al., 1995, p. 17, Dresner and Windle, 1996, p. 202 and N/A, *Playing for Position*, 2001, p. 41). The following paragraphs describe the typology as well as competitive implications of codeshare collaborations.

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<sup>76</sup> For partnership network websites see [www.qualifyer.com](http://www.qualifyer.com); [www.star-alliance.com](http://www.star-alliance.com); [www.skyteam.com](http://www.skyteam.com), [www.klm.com](http://www.klm.com), [www.nwa.com](http://www.nwa.com), [www.oneworld.com](http://www.oneworld.com).

<sup>77</sup> The figures are based on a survey of collaborative agreements of the world's top 200 mainland carriers.

#### 4.4.3.2.1 Typology of Codeshare Partnerships

Codesharing is a mechanism by which two carriers share each other's two-letter designator codes on flights, or by which one carrier permits a second carrier to use its airline code.<sup>78</sup> Codes can be shared unilaterally and bilaterally, denoting that either the operating carrier always remains the same on certain routes, including the codeshare, or that carriers reciprocally exchange duties as the operators of the flights. Codesharing can quantitatively be limited to route frequencies and be restricted to certain booking and travel classes, but always entails reciprocal FFP acceptance.<sup>79</sup>

A further classification of codesharing is by the type of flight operations to which it is applied. It may specifically be used on parallel or on complementary operations that connect gateways (see Oum et al., 1996, p. 190).

Parallel codesharing or gateway-to-gateway operations connect principal origin and destination cities on trunk-line routes, which usually involves 3<sup>rd</sup> or 4<sup>th</sup> freedom traffic (for freedoms, see 2.5.4). The operating carrier provides the actual equipment and crew, and distributes seats under its code. The marketing carrier, however, is not involved in the physical production of the air transport service, although it distributes the flight as its own. Parallel codesharing usually applies reciprocally revolving, thus bilaterally.

The other form of codesharing on behind-gateway operations is the so-called complementary codesharing (see Oum et al., 1996, p. 190). Feeder and dispersal traffic connect main hubs of participating carriers with outer stations that cannot be served by the marketing carrier for legal or operational reasons. In this case, a unilateral codeshare usually applies for non-domestic markets, since cabotage rights are rarely granted outside integration regions.

Both forms of codesharing can be performed unilaterally, i.e. with only one operating carrier, or bilaterally or reciprocally with all carriers involved in the agreement of physically operating the service. However, there could be limitations on reciprocal codeshare services due to the absence of traffic rights.

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<sup>78</sup> Commercial flights are identified with alpha-numerical codes, composed of two parts. The first part is the unique, two-letter airline designator code, which is assigned by ICAO. The numerical part of the code is determined by the airline itself and identifies the origin and destination of the flight. E.g., LH573 is a Lufthansa flight from Cape Town to Frankfurt. These codes are used in CRS, schedules and ticketing as well as in airline guides and on airport information boards.

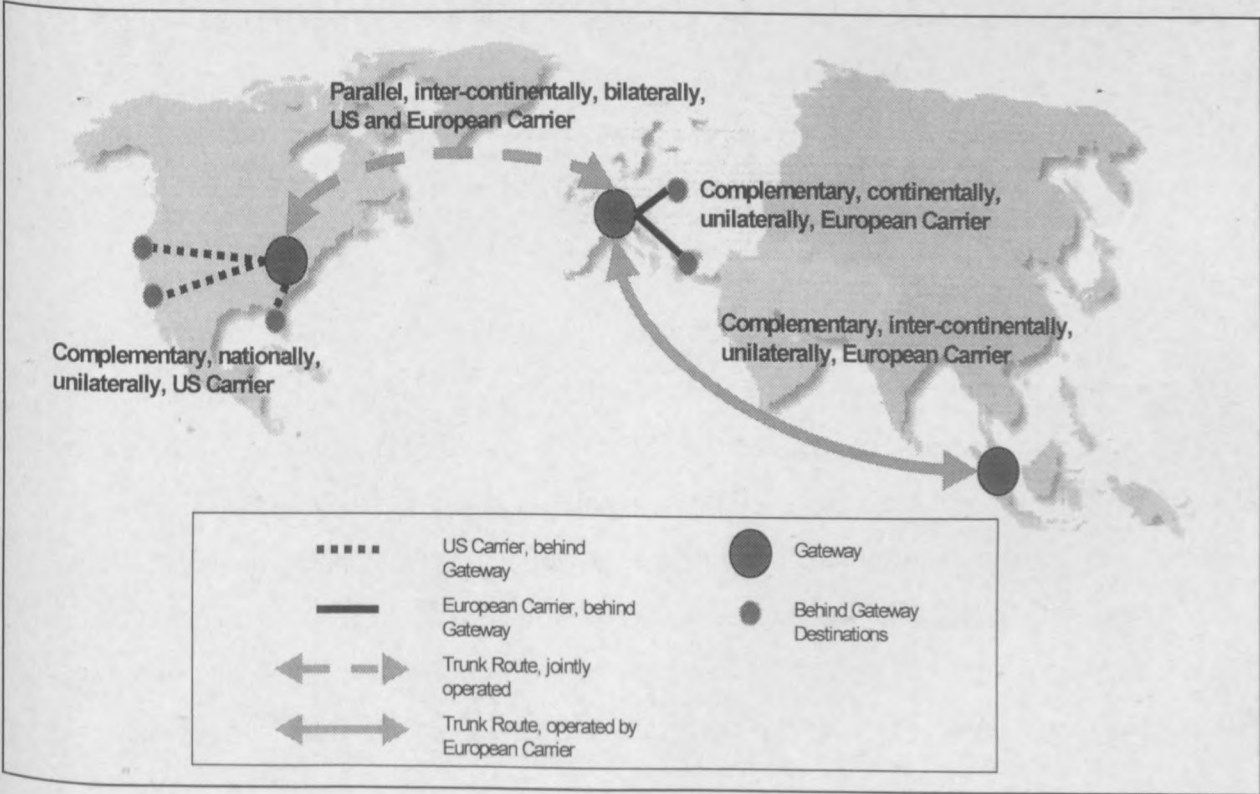
<sup>79</sup> In September 2001, Singapore Airlines and Virgin Atlantic signed a nonreciprocal codeshare on flights from London Heathrow to Singapore according to which Virgin Atlantic places its code on Singapore Airline's flights. The codeshare is restricted to economy class and limited to three flights a week only.



With regards to the geographical dimension, one can generally distinguish national, continental and intercontinental codeshare connections. National and continental connections allow the marketing carrier to virtually serve the operating carrier's national or continental destinations under its own code. Examples are Lufthansa being able to offer United Airline's US routings as its own - beyond the US-destinations that Lufthansa serves itself, and Thai Airways offering beyond-gateway, continental-Europe, quasi-proprietary destinations that are also being marketed under a Lufthansa code. The same applies to intercontinental complimentary codesharing where the marketing carrier is entitled to virtually serve destinations even beyond the operating carrier's continental home region. This satellite codesharing as well as continental codesharing are usually tied to the availability of traffic rights, as 7<sup>th</sup> and 8<sup>th</sup> freedom traffic is usually involved.

The figure 4.9 illustrates an exemplary set-up of a transatlantic US-European carrier codesharing and summarises the descriptive dimensions of codesharing.

Figure 4.9: Transatlantic Codesharing Model



Source: own overview

Based on different commercial sales agreements, seats on codeshare flights can be distributed by the participating carriers. Free sale agreements would allow both carriers to equally distribute seat capacities on all codeshare flights. Blocked space agreements have been described above and apply to codesharing agreements as well. The classification into soft or

hard blocks allows for different forms of risk allocation. Seat swap agreements in codesharing partnerships are distinct forms of blocked-space agreements where the same defined blocks of seats are assigned for distribution by the revolving operating and marketing carrier.

#### 4.4.3.2.2 Competitive Implications

As with some other forms and instruments of airline partnerships, it is the carriers' legal and economic inability to effectively increase the reach of their networks, that drives codeshare partnerships. Along with the circumvention of limitations in bilateral ASAs, codesharing offers some significant economic benefits to participating airlines:

- Higher frequencies to destinations already served (parallel codesharing)
- New destinations, not physically served by a partnering carrier (complementary codesharing)
- Traffic feed between domestic and international routes
- Quasi-online connections

Parallel codesharing allows the participating airlines to show greater frequencies of flights to destinations than they actually operate, thereby increasing their perceived market service on those particular routes. Airlines are furthermore qualified to expand their combined market share on international routes and to increase the share in their respective home markets (see Beyhoff et al., 1995, p. 24).

Codesharing makes concentrated hub and spoke networks more valuable by facilitating connections to networks on the other side. Hub and spoke operations, particularly the "banking" of flights that are a concomitant of effective hub and spoke operations, can be more efficient if carriers co-ordinate their flight schedules and operate codeshare systems. By allowing traffic to be consolidated and correspondingly trans-shipped between flights, codeshare operations can enhance load factors and allow airlines to reap the benefits of the existing economies of scope and scale. By consenting to co-ordinate schedules, two allied airlines increase the potential amount of traffic that occurs across their combined networks.

Market share gains from network extension are, moreover, magnified by extending the codeshare operations to and from spoke destinations at both ends of the partner carriers' networks (see Oum et al., 1996, p. 188). Formerly marginal feeder or defeeder routes can be positively influenced by the wider customer base. Routes can be sustained and the risk of new route development can be shared among codesharing partners (see Beyhoff et al., 1995, pp.



25-26). These share gains can be supported by competitive distribution strengths in the respective home markets.

Consumers prefer to book connecting flights on the same airline. Evidence indicates that consumers generally favour online over interline connections, the most optimal still being non-stop direct services. Passengers believe that online connections involve shorter terminal walking distances, thus making connecting flights easier, allowing for smoother baggage transfer, and believe that flight schedules are generally co-ordinated. From the customer's perspective, codesharing gives the impression of an online service and offers some features related to this service, such as single check-in, common FFP and co-ordinated flight schedules. Interline flights reflecting two or more carrier codes, suggest a drop of quality. The quality of codeshared connections is perceived to be almost as high as a single carrier connection, which makes it a cost-effective marketing tool (see United States General Accounting Office, 1995, p. 14).

It is this passenger preference that leverages the effects of codeshare flights' listings on CRSs. Moreover, travellers have traditionally suffered a dearth of information regarding their air transport options, which was compounded by the introduction of CRSs. CRSs provide the interface between the carriers and the travelling public. Airlines make use of the information channels provided by CRSs to stimulate traffic flows and to decrease information asymmetries. Connecting flights, appearing online as the result of a codeshare agreement, have in the past been listed ahead of true connecting flights in CRSs. The EU, however, has now banned a preferential display of codeshare flights on CRSs (see Pompl, 1998, p. 111). The succession-determining factor in most CRSs is the flight time for a city pair connection. However, the preferential treatment of online connections still finds application in domestic air services in the USA.

In addition, a flight can be listed in a CRS at least twice, resulting from the shared codes of the participating carriers. This so-called screen padding shows codeshare connections more often on a CRS than other air links. To avoid excessive screen padding, especially for multiple connection flights or multiple codesharing, the EU, in a codex, has demanded that CRS operators, vendors and airlines limit the number of listings of the same flight in a CRS to only two (see European Commission, 2000, p. 7). Nevertheless, screen padding is not restricted in the USA and thus gives codeshare partners a definite competitive lead over their competitors (see Steininger, 1999, pp. 298-299). Both, the priority display of codeshared

flights as well as the possible multiple listing of flights on CRS screens significantly enhances the chances of the flight being sold by a travel agent.

Airlines' attempts to increase their market presence through commercial partnerships have placed codesharing under considerable public attention, since it is perceived to be a means of indirectly increasing market access. Parallel codesharing has recently been the focus of competition authorities, as a reduction of rivalry can be expected from parallel services between capacity-constrained hub airports (for the example of British Airways and American Airlines, see Brueckner, *The Economics of International Codesharing*, 2000, p. 2). International codesharing is therefore dealt with in some bilateral negotiation processes in such a way that underlying traffic rights are required in order for codeshare service to be approved. When a third country is involved - in the case of complementary, continental or intercontinental codeshare services - specific provisions in bilaterals may be obligatory.<sup>80</sup>

Codesharing is regularly considered to be an operative and purely marketing-driven instrument of co-operation, since partners continue to operate and use their assets independently. While the latter is true, codesharing contains some organisational and regulatory implications that justify, at least partly, a strategic orientation. Codesharing is often an integral part, if not the basis, for highly integrative, common-goal-oriented business partnerships such as global airline networks. The organisation and preparation of codeshare partnerships, especially in networks, can strategically influence an airline's business operation. Schedule integration or harmonisation between the partners can strongly impact a carrier's performance in O&D markets. Service and technical requirements, operational adjustments or legislative prerequisites in order to be an eligible codeshare partner can substantially impact on an airline's corporate organisation.

The US Department of Transportation, in co-operation with the Federal Aviation Administration, for example, demands compliance with codeshare safety guidelines (see United States Department of Transportation, *Code-share Safety Program Guidelines*, 2000). Codesharing agreements among US carriers and between US and non-US carriers need government approval, which involves an application process (see Dresner and Windle, 1996, p. 206 and above). Market development and penetration, as a dedicated corporate goal of a

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<sup>80</sup> This is especially true of bilaterals with the USA. Since 1991, codesharing has been part of the US open skies bilaterals, and thus requires antitrust immunity (see Doganis, 2001, pp. 33-37). However, codesharing that has to be part of bilateral agreements makes one of its key motivations, namely circumventing ASA restrictions, absurd.



codeshare operation, can thus require strategic decisions. Set against the background of the prerequisites mentioned above, it is also the significance of the codesharing agreement in relation to the airline's overall size that can give this collaborative instrument a true strategic dimension. British Midland is a valuable partner for a host of airlines seeking access to the UK hinterland, due to its London Heathrow slot access, although many of the foreign codesharing carriers might not rank this particular codeshare too highly. For British Midland, in turn, these partnerships are the key competitive factor in gaining desperately required load factors (see Feldman, Code-sharing Promiscuity Pays, 1997, p. 37).

#### 4.4.3.3 Management Partnerships

Management partnerships rarely occur in international aviation. These partnerships can be best described as one airline, or a designated management section of an airline taking leading control of the managerial activities of another carrier. Another form of management partnerships constitutes airlines deciding to incorporate a distinct multi-airline management facility. This was, for example, the case in the Swissair/Sabena partnership. The two airlines were partly managed by joint governance structures, which included marketing, sales and human resources.

In September 2001, KLM and Air Namibia consented to KLM taking over the management of the then debt-ridden southern African carrier. The Namibian government had been actively involved in the search for a management partner. An equity involvement by the Dutch carrier is most likely to follow. A further management partnership was established between British Airways' consultancy arm and the Greek carrier Olympic Airways in 1999. The basic aim of the limited management partnership was to turn the struggling airline around. British Airways, however, terminated the contract in July 2000 after having declined to take up an option of a 20% stake in Olympic (see Baker, Olympic hunts for new Suitors, 2000, p. 21). Both Garuda and Philippine Airlines were managed by foreign airline executives in attempts by the governments to rescue the state-owned carriers (see Doganis, 2001, pp. 16-17).

Management partnerships are usually tied to other collaborative measures. In the now defunct Swissair/Sabena management collaboration, the Swiss carrier held a 49,5% stake in the Belgian national airline. They had a widespread codesharing agreement, a joint FFP and were both founding members of the Qualiflyer group of carriers.

Management partnerships can thus be highly strategic, as the Swissair/Sabena example shows, or rather operatively and consulting-driven, as exhibited in the British

Airways/Olympic case. The former showed all the signs of strategic action with extremely commingled assets, common goals and geographic comprehensiveness. The latter was rather opportunistic, focused on turnaround management and, at least for British Airways, motivated by revenue generation through consulting activities.

#### **4.4.3.4 Miscellaneous Interairline Collaborative Instruments**

The subsequent paragraphs briefly discuss some further collaborative instruments between airlines. The list does not claim to be comprehensive, but an attempt is made to recognise some of the most significant instruments.

##### **4.4.3.4.1 Traffic Handling Agreements**

Through traffic handling agreements, one airline is made an agent for the ground handling procedures of another carrier. Handling agreements usually include all ground handling of the aircraft, passengers, freight and mail at stations where a partnering airline, or other ground handling companies cannot provide the required services. Due to increasing deregulation and liberalisation of ground handling services, handling agreements among airlines will be less significant in future, as privately owned and specialised companies will increasingly provide ground handling services (see Gill, Ramp up, 2000).

Airports, as the current dominating providers of handling services and independent handlers, are in a consolidation phase, with alliances being formed. However, airlines still do 55% of handling themselves and airport providers account for another 10% of the market. The concentration, though, is far from being as high as in other aviation support services with the top two airline-owned handlers having a combined market share of 10% (see Pilling, *Empire Building*, 2001, p. 52). This is likely to change with the trend to divest from and disintegrate handling subsidiaries, which is seen as an important step towards necessary market consolidation.<sup>81</sup>

What will, however, impact on the ground handling scene are global airline networks negotiating common deals for all their members with particular ground handlers. These common handling agreements, to reap the benefits of economies of scale and scope, can be limited to certain airports or may include provision for handling entire countries or regions.

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<sup>81</sup> Lufthansa sold its ground handling subsidiary, GlobeGround, in 2001 as did SwissAir Group its handling wing, Swissport. The companies are number one and two respectively in international ground handling.



Classic, singular traffic handling agreements between carriers providing these services will consequently diminish in the future.

#### 4.4.3.4.2 IT Collaboration

Airlines are increasingly recognising IT as a strategic issue of vital importance to profitability. The network supplying most of the communication infrastructure for airlines was initially founded in 1949 as a joint venture by 11 international scheduled carriers under the name of SITA (Société Internationale de Télécommunication Aéronautiques). SITA operates a worldwide standardised network of mail transfer (SITAMAIL), a system for radio communication (SATELLITE AIRCOM) and provides data networks linking CRSs (see Pompl, 1998, p. 23 and Jäckel, 1991, pp. 65-66). It is the world's leading provider of global telecommunication and information solutions to the air transport industry and has recently also moved into the field of application service provision (ASP). Among SITA's more than 700 customers are airlines, aerospace companies, airfreight organisations, travel and global distribution companies, airport authorities and governmental institutions. Under this umbrella, Airlines are jointly developing and operating IT systems.

SITA's task primarily lay in linking the flow of data and communication between carriers, which could then be standardised in the years after SITA's incorporation. In turn, internal IT is often highly specialised and provides individually designed systems, which have become more capacious and complex and are exposed to short product life-cycles.<sup>82</sup> In-house IT systems therefore pose a certain risk to the user carrier as the costs of developing and supporting an IT infrastructure in-house are extremely high. On the other hand, airline collaborations call for swift and smooth transactions and thus require minimised IT friction among partners.

Airlines can potentially save IT costs through the joint development, maintenance and upgrade of systems. However, airline collaborations approach common IT infrastructures very cautiously. Building new, common systems and ERP solutions (Enterprise Resource Planning) takes time and money. In addition, regulators scrutinise common IT development and strategy. Common revenue management systems leading to joint pricing would only be

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<sup>82</sup> The following systems are classic internal IT systems: crew scheduling and optimisation, reservation systems, yield management revenue accounting, and inventory functions such as aircraft dispatch, maintenance and engineering, operational control, travel distribution issues, e-business, multi-access communications, departure control, passenger, baggage and cargo handling, and Internet transaction systems (see O'Toole, *Partners in IT*, 2000, pp. 50-51).

allowed in the USA once an airline partnership has attained immunity from antitrust laws. Airlines fear losing control of costs and prices and therefore, in some instances, oppose the idea of sharing information with a partner through a common system. In some partnerships, e.g. between KLM and Northwest Airlines, the considerations of loss of control and costs have lead to two independent software systems being run to manage revenue. However, their individual systems are at least partly integrated.

Swissair and Sabena had, under their joint management, fully integrated their IT systems. In late 2000, Star Alliance established StarNet to link its members' legacy systems with a multi-user outside system, using Internet Protocol (IP). The nature of this IT architecture allows easy and cost-effective links to the partners' individual systems. According to estimates, this so-called middleware solution saved the members of the Star Alliance USD 2 billion in conversion costs (see Baker, *Behind the Handshake*, 2001, p. 67). A similar IP solution, although restrictedly focused on FFP issues and irregular schedule data (delays and cancellations), was incorporated by Skyteam and called Skyteamnet in 2001 (see McDonald, *Speaking the Tongues*, 2001, p. 39). The downside of these middleware solutions can be seen in their minimal affiliating character, as members can quickly disentangle from the block of airlines without the risk of high sunk costs.

In an advanced, regional approach, Star is consolidating its alliance operations around regional centres in the Americas, Europe and Asia. Star will thus try and integrate IT systems in the three regions, with the regional junior partners adjusting to the IT systems of the senior allies.<sup>83</sup> Although only a partial integration of the block-wide IT structure, their choice leads to more commonality within the multilateral partnership.

In multilateral relationships, however, compromising on IT collaboration becomes exponentially more difficult with each new member entering. For example, to structure a common revenue management system, several options are possible: one entity's revenue management governed by one airline; a neutral service bureau as part of an outsourcing process; separate systems having partial sharing of data, or a bid price system that allows buying or brokering of seats among partners on a real-time basis. With each partner having its own philosophy of how to operate both an individual and a common revenue management system, the possibilities for shared structures are multifarious. This complexity has lead to

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<sup>83</sup> E.g., Star Alliance members British Midland and Austrian Airlines switching over to Lufthansa's IT system.



only 49% of the top 100 airlines becoming members of a global alliance by having some sort of shared IT structure (see O'Toole, IT Trends Survey 2001, 2001). Considering this background, outsourcing IT on an individual or common basis is increasingly becoming a requirement in airline partnerships (see Pilling, Drive to Outsource, 2002, p. 40). The future will probably bring more joint IT outsourcing action than common in-house IT structures (for further information on specific outsourcing strategies with SITA, see O'Toole, Partners in IT, 2000, pp. 50-51 and Moorman, A Helping Hand, 1999, pp. 66-68).

#### **4.4.3.4.3 Business-to-Business Transaction Collaboration**

Similar to airline collaboration in the distribution of their products to the customer (business-to-consumer, B2C), carriers aim at achieving cost savings and increasing their market power by pooling forces in business-to-business (B2B) transactions. Traditionally, carriers have pooled forces in technical B2B matters with specific reference to aircraft spares. With the current rise of virtual marketplaces through e-commerce, carriers can potentially revolutionise business processes, allowing them the benefits accrued from streamlined purchasing and supply chains, namely lower costs, reduced inventory and improved asset management. Buyer-centric, supplier-centric or neutral e-marketplaces are being developed in the aerospace industry in order to link air carriers with buyers and sellers of airline-related goods and services (for different models of B2B e-commerce see Berryman et al., 1998, pp. 152-154).

Among the largest buyer-centric B2B marketplaces are aeroXchange and Cordiem. While the first is owned by airlines only, the latter B2B portal is a joint venture between buyers and sellers. AeroXchange is a partnership between Cathay Pacific, FedEx, JAL, KLM, Lufthansa, Northwest Airlines, SAS, Singapore Airlines, Air Canada, Air New Zealand, American West Airlines, ANA, and Austrian Airlines. AeroXchange is a globally-focused marketplace, Cordiem, in turn, concentrates on major European and US American carriers and original equipment manufacturers (OEM) as members. They are: American Airlines, Air France, British Airways, Continental Airlines, Delta Airlines, Iberia Airlines, Swissair Group, United Airlines, and United Parcel Service. The OEM members are: Honeywell International, Inc., United Technologies Corp. (parent company of Pratt & Whitney) and Goodrich Co. Other B2B marketplaces are either smaller, collaborative set-ups, Internet start-ups, or single company e-marketplaces filling niches or directly competing against each other (see Hulley, 2001, p. 1, Walker, Maintaining an Edge, 2000, pp. 57-61 and Fitzsimons, 2001). However, the mentioned large marketplaces exhibit one distinctive feature. B2B e-commerce

collaboration, or joint ventures, develop irrespective of ties between carriers established in the form of strategic or operative commercial partnerships or B2C e-commerce.

The general development of the international e-commerce scene and the immediate benefits for participants will prove whether the current status of B2B e-marketplaces will prevail. The total value of procurement transactions in the international air transport industry is estimated to be between USD 200 and 300 billion a year (see Walker, Plane dotty, 2000, p. 66). A major benefit in e-marketplaces for airlines is seen in reduced inventory costs. Twenty per cent inventory reduction can be potentially expected from pooling and real-time visibility of inventory among larger carriers (see Hulley, 2001, p. 2). On average, airlines already using B2B applications (35% in 2000) estimate that they can achieve between 12% and 13% cost savings through B2B (see SITA/Airline Business, 2000, p. 16 and O'Toole, IT Trends Survey 2001, 2001). Already established commercial partnerships can certainly help to integrate e-commerce collaboration. So far, however, little has been done to embrace common electronic B2B solutions within already established airline partnerships.

#### **4.4.3.4.4 Technical Collaboration**

Historically, airlines early on started co-operating in technical affairs in order to capitalise on pooling effects, but also to make use of individual know-how in particular MRO aspects.

An airline-based technical forum, the International Airlines Technical Pool (IATP), comprises about 100 carriers collaborating in purchasing spares. The prime goal of this collaboration is to cut spares' storage costs. IATP is, however, currently losing significance as airlines are individually, or in newly formed buying consortia, purchasing spares directly from the manufacturer. They are thus moving away from collectively buying large tranches of spares for onward use by IATP shareholders.

The incorporation of the ATLAS consortium by Air France, Alitalia, Lufthansa and Sabena in the early 1970s was purely aimed at reducing maintenance costs for the airlines involved. ATLAS enabled member carriers to share their technical resources over similar aircraft types. Notably, ATLAS was composed of European airlines whose respective fleets, in isolation, were not large enough to sustain a dedicated in-house maintenance operation. In this partnership, each airline specialised in dedicated aspects of maintenance and the agreement additionally encompassed co-operation and fleet co-ordination. In essence, the entire joint maintenance programme revolved around the common agreement on which aircraft types the airlines would each operate, working to shared specifications and quality standards. A form of



bartering was established by which experienced carrier A would do maintenance work on certain equipment for carrier B. Carrier B would, in exchange, use its specific experience to maintain other equipment of carrier A. Tax avoidance advantages could thus be achieved and organisational complexity alleviated by minimising payment flows between the parties. Similarly structured, and based on the very same motivation, was KSSU - a consortium of KLM, SAS, Swissair and UTA - the latter an airline which was later absorbed into Air France (see Hanlon, 1996, pp. 208-209 and for a more detailed description, see N/A, *Airline Technical Alliances - Evolutionary Trends*, 2001, pp. 54-56).

However, ATLAS and KSSU fell apart when the allied carriers were being privatised and went their own separate ways in terms of fleet planning. Since then, the maintenance partnerships have ceased to be based on cost/work sharing models with minimum monetary transfers (see N/A, *Airline Technical Alliances - Evolutionary Trends*, 2001, p. 58). The original idea of benefiting from collaborative action based on co-ordinated fleet planning and practice assignment, could not be sustained.

A current maintenance consortium is Swiss Air Group's and Lufthansa's joint maintenance venture, Shannon Aerospace. Not allied in a commercial partnership, the two carriers managed to successfully establish this joint heavy maintenance project in Ireland through their maintenance subsidiaries SR Technics and Lufthansa Technik respectively.<sup>84</sup> In this business, the carriers involved do not just reap benefits from the mere know-how and cost synergies, but also from the lower labour costs in Ireland. Similar to the Shannon Aerospace example, the joint venture of Air France Industries and its SkyTeam partner, Delta's subsidiary, Delta TechOps try to gain substantial third party business rather than directly benefiting from scale effects with immediate advantages for the partnering carriers.

Most technical collaborations occur outside the major partnerships. Only about 7% of marketing alliances also co-operate in joint engineering and maintenance as well as joint inventory and purchasing (see SH&E, 1999). Technical partnerships thus seem to be a phenomenon outside the widely-known, more marketing-oriented, collaborations. It seems that technical and commercial partnerships do not work for each other, as maintenance does not figure highly in the motivation for getting together. However, there appears to be a general move to more individual airline agreements with manufacturers and MROs. Smaller

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<sup>84</sup> At the time of this writing, the future of Shannon Aerospace was still unclear due to Swissair's bankruptcy.

airlines prefer straightforward contracts between each other and with technical providers, while the bigger carriers particularly tend to shift capital exposure to airframe OEMs, by means of consignment stock leasing, rather than collectively purchasing their own spares pools (see N/A, Airline Technical Alliances - Evolutionary Trends, 2001, p. 60).

#### **4.4.4 Summarising Aspects of Forms and Instruments of Collaboration**

The above could only partly capture the multitude of forms and instruments of horizontal interairline collaboration. Airlines are creative in finding ever new-fashioned ways of operatively and/or strategically joining forces for the benefit of their economic survival and in pursuing the provision of increased customer service.

Collaborative agreements are therefore as individual as the participating carriers. While the airlines' value chain activities and certain quasi-standardised functional collaborations (e.g. codesharing, GSA) provide a general framework for horizontal alliances, their separate organisation and design vary greatly. Specific individual motivations, distinctly varying company organisations and macro-circumstances, as well as the perceived and actual success of collaboration lead to discrete set-ups and the ultimate evolution of partnerships.

However, two key evidences in partnership development signify a certain pattern. Airlines are increasingly building blocks of collaboration, whether multilateral umbrella brand partnership, multi-party B2C collaborations, maintenance and procurement consortia, or others. Collaborative strength thus seems best achievable by establishing groupings quantitatively beyond the classic dyad organisation. Airlines do not, however, ally with the same partners in each of their grouping constructs. The member composition of these blocks is different and reflects the distinct demands that airlines have vis-à-vis the collaborative objectives and their partners. This is why the second key evidence is concerned with the airline industry increasingly migrating into a network economy. Networks allow for an array of direct and indirect, deliberate and unintentional linkages between carriers. These connections ultimately affect all players of air transportation. In the current stage of air transport evolution, only this multitude of linkages seems to promise economic gains.

The fact of individual partnership building as well as the migration into networks mandates requirements for successful partnership management, which are discussed in chapter 5.



## 4.5 Critical Views of Airline Collaboration

In General, airline collaboration is not unanimously welcomed. Critical issues of airline collaboration originate from various sources, of which the main are:

- Regulatory and competitive censure
- Demand-driven disapprobation
- Industry-inherent critique

A comprehensive discussion of these areas would not serve the purpose of this research project. However, selected aspects are introduced, supplemented by a more detailed discussion of negative partnership effects in a later chapter (see 6.3).

### 4.5.1 Regulatory and Competitive Criticisms

A main censure of carrier collaboration resides in the doctrine that if two airline competitors form an alliance, the result may be a reduction in competition and/or an increase in air fares, as the carriers collude instead of compete (see Park and Zhang, 2000, pp. 367-368).

A reduction in competition would occur if two carriers that operate on overlapping non-stop and connecting routes form an alliance and eventually cease to rival each other. If markets have capacity constrained airports, competition may be further hampered, or even eliminated, because of potential competitors' inability to obtain take-off and landing slots, gate space and access to other critical airport infrastructure (see Youssef and Hansen, 1994, p. 430, Dresner and Windle, 1996, p. 203, Vander Kraats, 2000, p. 61). Moreover, airline partnerships among carriers operating hub and spoke networks normally enhance demand for the entire joint network and increase the power of the networks in the respective hub markets (see Borenstein, 1992, p. 55 and Stragier, 1999, p. 1). The effects of hub premiums in this regard were discussed above. These issues are potentially the case with regards to the negative elements of the proposed British Airways and American Airlines partnership. The two carriers already provide close to 70% of services between London Heathrow and the main US gateways. The situation would worsen if, *ceteris paribus*, they would succeed in their pursuit of antitrust immunity in the USA (see United States General Accounting Office, International Aviation: Competition Issues in the US-U.K. Market, 1997, pp. 2-3).

On this exemplary basis, governments are generally assessing whether international airline partnerships are competitive ventures offering profit and traveller salvation, at least until regulatory barriers fall, or malevolent schemes aimed at replacing government restrictions that

prevent competition with marketplace restrictions (see Feldman, 1994, p. 173). The gradual disappearance of regulatory constraints in global aviation during the past 20 years has particularly increased competition between market players, but at the same time it inflated the risk of anti-competitive behaviour. This is why competition-supervising agencies are constantly eyeing airline collaborations, their use of collaborative instruments and the incorporation of collaborative forms. However, competition supervision is not a standardised procedure. Generally, global alliances between carriers are exposed to the competition rules of different constituencies. Airline co-operations across the North Atlantic are mainly subject to the competition laws of the EU and the USA, which might lead to two or more competition authorities reaching conflicting or incoherent decisions.

The forms and instruments of interairline collaboration that national authorities generally judge to be anti-competitive can therefore vary. Airline partnerships within the USA, or between a US and a foreign carrier require government approval if they incorporate either of the following forms and instruments:

- Marketing and codesharing agreements
- Joint operations with revenue pooling, fares and inventory control, joint marketing and sales, network planning, standard service contracts and shared marketing data - in this case antitrust immunity is needed
- A foreign carrier's equity participation in a US airline<sup>85</sup> (see United States General Accounting Office, 1995, p. 23).

The US government sees a potentially injurious impact on its home airline market by all of the above-mentioned collaborative forms and instruments and thus requires approval for these alliance constellations (for a discussion of domestic welfare implications by airline alliances, see Clougherty, 2000). However, the main impact on collaboration develops from the ruling that no cabotage rights are granted to foreigners and because of airline ownership restrictions. Although the US government expedited the alliance movement through its protectionism and initial deregulation, it prevents full co-operation or cross-border concentration from occurring, due to its investment barriers and limitations on operation (for a critical discussion, see Doganis, 2001, pp. 45-46).

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<sup>85</sup> Equity participation in a US carrier is limited to 25%.



The European Union has widely abolished restrictive legislation for airline collaboration on a Europe-wide scale. Circumventing the negative effects of a protective policy concerning its member states' carriers, the EU has allowed every EU carrier to serve any city pair in the Community, including pairs within the territory of a single member state. However, some restrictions do still apply. Ownership by nationals or companies from non-member states is limited to 49% (see Niejahr, 1998, pp. 11-12). Basic Community competition rules affect the European airline industry, mitigating perceived harms to competition through a series of remedies. Accordingly, the EU Commission still has to approve airline partnerships which, in some instances, can take an economically unjustifiable period (for an exemplary discussion of the EU merger regulation, see Flores Jr., 1998, p. 1101).

The situation is worsened by airlines and regulative agencies' differing approaches regarding the scope of possibly competition-harming behaviour. Whereas airlines forward arguments on the effects of global competition (macro), the EU Commission scrutinises rivalry on selected connections (micro) (see Jegminat, 1997, p. 62). The EU is currently even questioning the right of carriers to attend scheduling and interlining conferences, claiming that these conferences are against consumer interests. However, the possibility to apply certain group exemptions can also be adopted by the European Commission, giving way to potentially restrictive alliances<sup>86</sup> (see Stragier, 1999, p. 2). The current situation is unsatisfactory for airlines. The Board of Airline Representatives in Germany (BARIG) has urged the European Commission to deal with regulation on airline alliances in a more market-oriented way, while also safeguarding the interests of small and medium-sized carriers (see BARIG, Resolution, 1998).

The bilateral regime is still prevalent in Europe, despite the integration region being a single market. Thus, flights between EU Member States and non-EU countries are still regulated on the basis of distinct bilateral agreements, which impose a variety of restrictions on individual airlines and partnerships. Legislation impedes airlines from entering into full cross-border mergers without the airlines involved potentially losing their traffic rights. On the other hand, US carriers and their alliance partners can fairly freely enter the EU region and serve almost any destination, while European carriers can only serve selected US destinations from their

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<sup>86</sup> A prominent example of exemption is the SAS/Lufthansa partnership in their joint venture to cover services between Germany and Scandinavia. The European Commission accepted that the partnership agreement fulfilled the requirements for an exemption, especially those regarding the promotion of economic progress and the benefit to consumers (see Flores Jr., 1998, p. 1102).

home country. This practice is considered discriminatory and distorting, and has lead the EU to threaten selected air service agreement between some of its member states and the USA (see Knibb, *Play by the Rules*, 2000, p. 74).

#### 4.5.2 Demand-oriented Criticisms

Demand-driven opposition arises from the consumer of the air transport service. Many of these concerns are basically expressed by constraints that regulatory and competition authorities establish to restrict airline collaboration. The main concerns potentially developing from airline partnerships regarding negative effect on passenger are:

- Limitations on route networks, frequencies and connectivity
- Disadvantageous fare development
- Drop of product quality standards
- Reduction of safety and security standards

As a premeditated reduction of competition is a key goal for airlines forming partnerships, the effects on passengers can be potentially negative. The decrease of effective competition is most marked in route-specific or regional alliances. If two carriers previously competing on a route without a third competitor decide to co-operate with only one partner serving the route, a duopoly situation turns into a monopoly. Fares can be negatively influenced by monopolising or cartelising O&D markets. A situation where airports are also capacity constrained aggravates the situation, as the possibility of alternative supply is diminished and disproportionally high premiums can be charged by hub carriers. Consumer advocates have repeatedly warned that alliances, paired with antitrust immunity and already existing hub premiums, lead to significantly higher fares than in free and unrestrained market environments (see Reynolds-Feighan and Berechman, 1998, pp. 274-275). Cast in this context, co-operating airlines can also hold back capacity growth and refrain from passenger-friendly schedule co-ordination. Both issues can have a negative effect on consumer welfare.

Codesharing as one marketing instrument of airline co-operation is critically discussed in the business as well as in the legal and political environment. It is seen as a possible form of misleading passengers in their choice and during consummation of an airline product. The concerns primarily arise with the possibility of screen padding and other forms of CRS bias. Despite codes of codesharing conduct being established by industry associations and governmental authorities, passengers still feel misled by codesharing as CRS's display algorithms and airlines' information policies can lead to misinterpretation. As a result,



competition can be virtually reduced because a travel agent, who habitually books flights from the screen, would not provide consumers with information on a competing flight option. Triple listings of the same flight option also reduce the efficiency of travel agents who attempt to identify all alternatives for their customers.<sup>87</sup> Competitors, even those with lower fares, might be crowded out and pushed to lower, less utilised screens (see Hemphill, 2000, pp. 22-23).

Other sources of conflict and opposition are the possible deception of passengers. Passengers in the pursuit of online services might feel deceived by actual interline transportation on a complementary codeshare (see Triller, 1995, and N/A, *Moving towards Consumer Protection*, 1995, Beyhoff et al., 1995, pp. 41-42). Parallel codesharing can potentially lead to dissatisfied passengers, as the operating carrier, per definition, is not necessarily the same as the marketing carrier, from which the transport product has been purchased or whose services were expected. In the case of product quality differences, or safety and security contrasts with clear disadvantages on the operating carrier's side, passengers can rightfully feel defrauded. Codeshare alliances require a high standard of agreements on service levels among partners and uniformity in hiring and training staff to ensure that the consented and communicated level of service is accomplished and maintained. While it should be in the partnering airlines' immediate interests to avoid quality variances, they must also ensure that passengers are informed about the codeshare situation and the identity of the operating carrier.

Closely linked to codeshare agreements are FFP links between carriers. While in most forms of multilateral alliances and codeshare agreements, FFP miles can be reciprocally collected and redeemed, the flight award procedure among partners poses problems and can lead to customer dissatisfaction. It is often the result of too little seat allotment for award flights, different mileage tiers for selected sectors, award procedures and IT issues among partners that lead to customer aversion (see Hemphill, 2000, p. 23).

A further issue that should be addressed with regards to inconvenient effects on passengers, is the adverse impact of alliances on the expansion of direct services. Codesharing has repeatedly discouraged development of direct services and forces circuitous routings onto the travelling public. This is most often the case in routings that were once attractive destinations

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<sup>87</sup> Triple listing is not allowed in the EU.

for a single carrier, but under a partnership can be served more efficiently through a partner's hub operation.<sup>88</sup>

On the other hand, several studies prove the positive effects for consumers of air transport products by airline partnerships. The US Department of Transportation has empirically proven that the major alliances operating on the North Atlantic have lead to traffic stimulation and fare reduction (see United States Department of Transportation, International Aviation Developments, Second Report, 2000, pp. 4-5). Traffic stimulation primarily originates from network reach, mainly through connecting traffic and lower passenger yields. Fare savings of multilateral alliances have been empirically evaluated in another study with a specific reference to codesharing in the Star Alliance. The results show that membership in a multilateral alliance, using codesharing, and within the current status of immunity from antitrust legislation, has lead to fare reductions of 27% for interline passengers compared to unaligned, non-immunised carriers (see Brueckner, 2000, p. 2 and also Park and Zhang, 1998). However, this data applies to interlining passengers only. Whether airline co-operation on direct city pair markets does have an anti-competitive effect and leads to rising fares, was not evaluated.

#### 4.5.3 Industry-inherent Criticisms

Opposition to airline co-operation also comes from the industry itself. Although most international carriers are horizontally allied in some form or another, and the phase of shopping for and swapping of partners seems to have lost momentum, some airlines are reluctant to commit to partnerships. Perceived conflicts, spur that reluctance, but also an endogenous resistance towards the concept of alliance building does so.

Carriers lining up in groups can create virtual monopolies on routes between the hubs of alliance partners, permitting the exercise of considerable market power in hub-to-hub markets. Entry to such routes is inhibited, not just by airport capacity constraints and artificially built entry barriers, but also by government regulation. It is this potential, and the exercise of market power that motivates opposition among competitors. Virgin Atlantic has vehemently been opposing and is legally challenging the proposed partnership between British Airways and American Airlines as being harmful to the passenger and the industry's interest.

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<sup>88</sup> E.g., the once direct services of Swissair from Zurich to Cape Town were routed to Johannesburg, the hub of Swissair's former partner, SAA. Passengers were then carried domestically to Cape Town on SAA.



However, it is widely consented that Virgin follows a vested interest in opposing the alliances, as British Airways/American Airlines affect markets Virgin currently serves.

Lufthansa has entered a widespread partnership with Eurowings in the regional central European market, monopolising a number of routes. After regional and domestic carriers complained to the German competition surveillance authority, Lufthansa had to compensate the complainant with marketing support and the provision of frequencies (see N/A, Pressemeldung des Bundeskartellamtes vom 06.03.2001).

The airlines' call for governmental control is seen by some as the necessary cure to curb anti-competitive alliance impacts: in turn it deters others from entering into airline co-operation. Governments that suspect collusion to reduce competition and increase fares, lead action to control alliance agreements. Carriers thus fear being obstructed from receiving sufficient dividends from their partnership-organisational efforts and resource allocation. One factor is time. The example of British Airways and American Airlines shows that approval by competition agencies can take unforeseeably long. Costs can also occur in the form of compliance costs that are incurred in order to design the partnership in accordance with the demands of competition or regulatory authorities (see Steininger, 1999, pp. 163-164). A partnership is simply only worthwhile if the benefits adequately outweigh opportunity costs and if the risk of sunk costs can be minimised (see Lutz, 1993, p. 230 and Klanke, 1996, p. 56). To have unrestricted control over key assets is an important aspect in this cost/benefit calculation. The fact that airline partnerships are forced to give up slots at congested hubs, or have to actively support competitors, in exchange for receiving exemption from antitrust laws, has recently caused serious internal friction within alliances.

Two other main issues that alliances will be dealing with are labour and safety. Pilots unions typically disfavour alliances, since they fear jobs will migrate to the lower cost carrier. Pilots of all major airline alliances have thus agreed to co-operate with one another to protect labour rights. The pilot unions of the Wings Alliance partners wrote a constitution to establish a co-operative organisation; Oneworld and Star Alliance pilots have formed similar groups to protect jobs and have a voice in alliances affairs.

As alliances become more firmly grounded, and in the light of increasing security considerations, safety concerns are coming to the forefront. Certain carriers have suspended their codesharing with other carriers as a protest against their safety standards, e.g. Delta once

discontinued its partnership with Korean Air Lines due to safety problems (see Merrill Lynch, Pierce, Fenner & Smith Inc., 1999, p. 3).

A further airline concern worth mentioning, although this has not yet materialised on a larger, cross-border scale, due to the continued regulatory constraints of global aviation: in a significant number of cases, company alliances end with one partner being taken over by its counterpart (see Bleeke and Ernst, 1991, p. 131). Currently, global aviation is not in a consolidation phase, but experience from other industries indicates that the possibility of full take-overs is imminent. This especially applies to partnerships between differently-sized carriers, where the smaller and less powerful airline must fear being taken over by the larger partner.

Objections to partnerships also emerge from more internally-oriented issues which carriers believe to be associated with airline collaboration. Cannibalisation of positive alliance effects through size-driven partnership complexity is one argument against airline partnerships (see Flint, *Is Bigger Better?*, 1998, p. 32). This complexity might develop from organisational and managerial issues arising with airline partnerships.

Airlines involved in or preparing for horizontal partnerships can be distracted from their core business tasks. This distraction classically evolves from human, material and financial resource allocation to prepare, negotiate, implement and manage the partnership. Personnel must be assigned to various integrative tasks, which can lead to managerial and operational discontinuity. The formation period can thus be costly and cumbersome (see Koot, 1988, p. 350). Most evident is resource allocation in IT, where integrative tasks can be extremely demanding and can pose a serious threat to daily business processes<sup>89</sup> (see de Pommès, 1998, p. 26).

The joint achievement of competitive or collaborative advantages in airline partnerships, relies on both partners merging or bringing together selected parts of their value chains. The constitutive characteristic of commingling assets illustrates this coalition for strategic alliances. However, this set-up constitutes a certain dependency on the input and the dedication of the partners' collaborative accomplishment. The possibility of one partner behaving selfishly or opportunistically, jeopardises the partnership. A leakage of proprietary

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<sup>89</sup> In the case of Austrian's entry into the Star Alliance, configuration expenses were about USD 42 million of which 40% had to be laid out for IT harmonisation (see Feldman, *Alliance Costs Start Building*, 2000, p. 41).



knowledge to the partner who may later use this knowledge to erode the firm's advantage, also demonstrates the dependency of both partners in their pursuit to jointly reap the benefits of their agreement (see Day, 1995, p. 297). Dependency and appropriation considerations are an important concern and can lead to organisational opposition to alliance building.

Other disadvantages perceived by airlines to be obstacles to entering into partnerships are multifarious. The terminology synergy or relationship capital summarises some of these factors and the set of understandings and practices that facilitate collaboration (for an extensive discussion of the concept of partnership synergy, see chapter 6). If decision makers do not see sufficient relationship capital, they will oppose a collaboration (see Gomes-Casseres, 1996, pp. 85-88).

The following describes possible frailties in airline relationship capital components.

- Management styles, company cultures and modes of operation may be different, producing disputes requiring resolution by top management.
- The entire business strategy of one partner may need to be abandoned or changed to accommodate new, collaborative strategies. This in particular applies to smaller, junior partners of multilateral alliances.
- Too little depth in personal relationships between counterparts in each firm (see Lutz, 1993, p. 168).
- One partner not fulfilling commitments made to the other in a reputable manner.
- Negative lessons drawn from experience on what does and what does not work in relationships.
- Inability to rely on decision making and on a notion of fairness based on best practise.
- Mistrust among partners as expectations of mutually assured reciprocity does not occur.
- Little mutual forbearance as the commitment to accept short-term costs in the pursuit of long-term benefits is not commonly accepted.
- Agreements on marketing strategies and branding issues may not be achievable, or may be time consuming, thus leading to negative image effects (see Shearman, 1992, p. 120). This especially applies to umbrella brand concepts.
- Standard of service commonality might not be achieved.
- Sharing of costs and benefits can lead to controversies.

The cost-side in alliances involves a further opposition category. Latecomers in multilateral partnerships are usually confronted with an entry fee. These are costs to switch to alliance-

wide standards, links to reservation systems and marketing, but also higher prorates and other commercial arrangements that represent a type of endorsement fee. Entry fees are based on a prospective partner's revenue and additionally compensate the founders of the multilateral alliance for brand and other developments (see Feldman, 2000, *Alliance Costs Start Building*, p. 41). Multilateral alliance requirements towards a new member can add to those costs. Service and safety, as well as technical and financial compliance and requirements largely contribute to the endorsement of a new partner.<sup>90</sup> Entry fees in multilateral partnerships can be substantial and can lead to decisions not to enter.

Other costs to be borne by alliance members in fulfilling alliance-wide standardisation requirements can represent sunk costs. The establishment of common FFPs, IT systems, service commonality or other compliance issues can be associated with high entry fees and in the case of an exit, are lost investments. The example of some of Swissair's former regional partners going into liquidation themselves after Swissair's demise, underscores sunk costs and dependency concerns.

#### 4.6 Summary and Implications

There has been a worldwide trend to forming horizontal partnerships in every industry for quite some time, and air transportation is no exception. As for other industry sectors, airline collaboration does not occur without - often justifiable - criticism and substantial political and regulatory hurdles, which influence its development and impact on the type of collaboration allies agree upon.

The nature of interairline partnerships is defined by a motivational spectrum, ranging from operative goals to strategic objectives and, very closely, attempts to emulate mergers. Anticipated positive cost and revenue considerations are the quantifiable effects from horizontal airline partnerships. One key standard intent in carrier collaborations is, however, their potentiality to circumvent persisting regulation, which still inhibits global consolidation.

To date, horizontal airline linkages occur primarily through marketing alliances - operative as well as strategic in orientation. While the collaborative areas referred to in theory as well as

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<sup>90</sup> The US DOT announced in 1999 that it would set up a system whereby it would not approve any new codeshare partnerships until the Federal Aviation Agency (FAA) had approved the partner's safety auditing programme. Star Alliance performs audits of safety, maintenance, finances, products and other areas. If these audits conclude that the airline is fulfilling the minimum requirements set, then a codeshare might be made available to the airline.



by airlines themselves essentially contain the entire passenger air transport value chain, currently, the main focus in practice is on marketing and the leading part of these partnerships are rather unbound by nature. Therefore, revenue enhancement objectives as well as market access considerations outweigh the cost savings potential that might occur in establishing joint marketing organisations.

Very few alliances may, however, be characterised as almost strategic and de facto merged airlines in form and function - where this is possible. Features such as joint branding, loyalty schemes, common management structures, equity linkages and some form of joint strategic planning process manifest close connections. They will certainly further develop into even more complex webs of links, with the general trend in collaborating inclining towards more integration of operations, and drastic changes being expected in strategy and support functions.

Generally, there are many forms and instruments airlines use for their - often multilateral - collaborations. These types of collaboration reflect the linkages' basic intentions and vary in their closeness. Profound partnership depth and width are therefore not necessarily a signal of the partnership's quality. Some relationship intentions might be satisfactorily achieved with low profile, shallow collaborations. The really important challenges of global airline consolidation are, however, easier achievable through more attached relationships, incorporating a wide variety of functions. With some carriers being able to engage in closer-type partnerships, a threat emerges for other airlines in trying to catch up with consolidation and in advancing their ties to others. Closely-knit global alliances will exert common control over revenue management, fleet planning and scheduling in order to realise the benefits - for passengers and the companies - the tight alliance as an emulated merger is supposed to deliver. Distribution will take new forms. Joint efforts to cut out the middleman, and migrating to direct, ticketless air transport sales structures, will be increasingly attempted on platforms which mimic classic brick-and-mortar travel agencies.

However, airline consolidation, also in its prevalent emulated form through partnerships, cannot be described as overly effective. Existing national ownership and control provisions ensure that de jure global airline entities, both in form and in function, cannot presently exist outside the main integration regions. Antitrust regulation - developed to protect consumers from monopolies - also has an impact on the pace of airline industry consolidation, and continues to restrict some large-scale consolidations. The trend of creating collaborations which aspire to function as global airlines, but which are not structured and do not appear to

be globally operating airlines, is based on the long tradition of skewed development in the international airline industry. In addition, airlines currently lack the will and certainly the managerial capabilities for merging, thus mirroring other global industry trends.

The task at hand is the creation of an efficient, secure, global-spanning, and profitable air transportation industry, unencumbered by major regulative interference and exposed to free and fair market forces. In the medium term, the uncertainty engendered by the regulatory system stunts and distorts the development of airlines. However, airlines are required to live with these circumstances and they will need to accumulate expertise in order to meet the challenges associated with collaborations. Many carriers lack the confidence and governmental proficiency to take the bold technological, organisational and financial steps required to create the individual airline and the airline network of the future. And thus they also lack sophistication to operate horizontal partnerships. The success of future airline partnerships will be predicated on their efficiency, financial strength and access to global markets, or the dedicated service of niches. Regulation will dictate if, when, and how this can occur. It can either continue to inhibit these developments, or it can play a leading role in directing and nurturing them.

In the long term, it is very probable that governments will reduce foreign ownership limitations on airlines, just as they have been reduced in other global service sectors such as telecommunication, financial services and energy. For the time being, airline collaboration is the only vehicle to overcome these limitations. In the short- to medium-term, airlines which can cope with the challenges of this interim situation - between deregulation and full liberalisation - will prosper. Only once commercial carriers comprehend the task of forming webs of horizontal links, will they be able to lever themselves to an advantageous position that will guarantee survival upon the commencement of true globalised airline consolidation.



## 5 Delineation of Prerequisites and Key Success Factors of Airline Collaboration

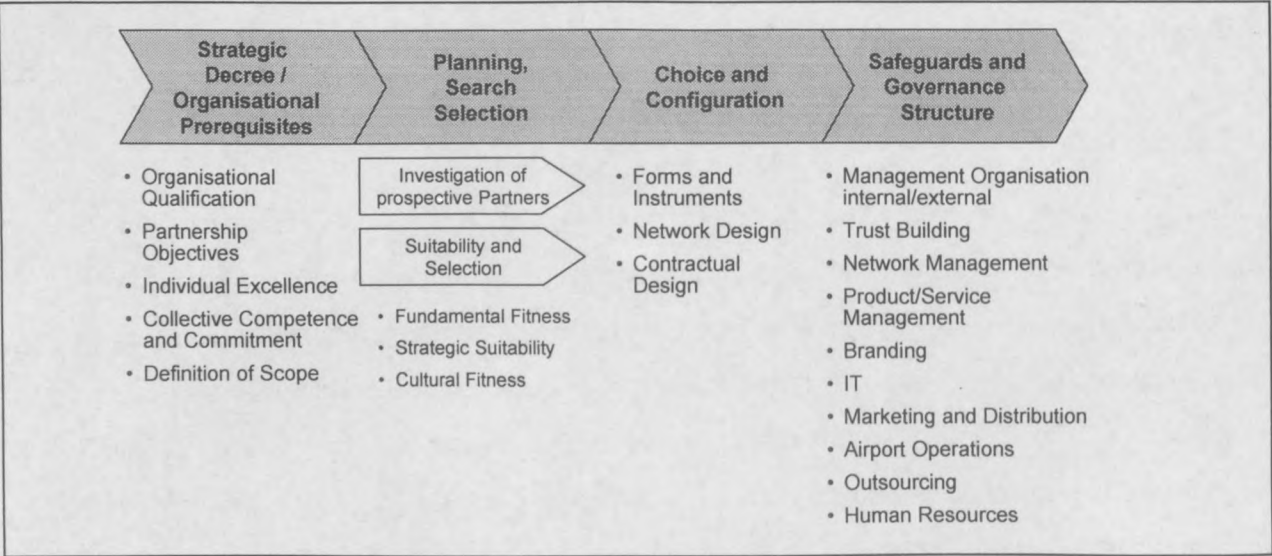
### 5.1 Introduction

The previous chapter described the basic motivations as well as the forms and instruments of airline collaboration, during which it also became apparent that many airlines are not alliance-sophisticated and are not always able to face the challenges of partnership management and operation successfully. Yet to be discussed are the prerequisites for genuinely thriving airline partnership ventures with sustainable competitive advantages. To determine these prerequisites, the imperatives prior to entering a partnership and the key success factors while in a partnership need to be evaluated.

The discussion of prerequisites and success factors opens up numerous queries about airlines' initial collaborative capabilities. Evidence in the global alliance scene strongly suggests that there are systematic and structural differences in collaborative proficiencies. These capabilities are built by airlines as they gain more experience with partnerships and the extent of this learning may affect the relative success of those carriers with alliances (see Gulati, 1998, p. 308). Other theories take the stance that it is not so much experience, but rather conceptualisation of collaborative tactics and strategies that lead to success (see Khanna, 1998, p. 340 and Kogut, 1988, p. 322-323). This poses questions on what these capabilities are and what the systematic tactics might be that airlines could use to internalise these capabilities.

This chapter is structured according to the organisational sequence of events in entering collaborative agreements and important partnership-managerial measures to ensure sustainable success in interairline partnerships. The figure below summarises the key aspects to be discussed.

Figure 5.1: Event Sequence and Key Partnership Prerequisites



Source: own compilation

This chapter follows the described methodology of a combination of a thorough investigation of secondary resources and empirical evidence and inductive theory building (see chapter 1 and the interview guideline in the appendix). Empirically-gathered information from the mentioned primary sources, particularly supports the quest to delineate the most salient steps and configurational aspects in the process of airline alliance formation and its management.

5.2 Strategic Decree and Organisational Prerequisites as First Steps  
Towards Interairline Relationships

Horizontal partnerships are just one of a range of business development alternatives, through which an airline may proceed to improve or alter its competitive position. Horizontal interairline collaboration is fast becoming a mainstay of competitive strategy, but should also be regarded as a transitional ploy through which more permanent solutions may be found. The current phase of interairline collaboration too needs to be evaluated as a stepping stone towards the emerging phase of air transport development, namely globalisation and consolidation. Airlines are consequently required to invest more resources, deploy more staff and start to appreciate the soft aspects of collaboration and are, in fact, gradually becoming more alliance sophisticated as they do so (see Parkhe, 2000, p. 2). The following discussion describes issues for successfully establishing airline relationships, based on organisational prerequisites and presuming that a strategic decree for a horizontal partnership has been reached.



The basic and initial uncertainty in strategically deciding to establish an interairline partnership is to determine whether an organisational qualification is prevalent. What often appears to be neglected in the very nascent stages of partnership planning processes is, however, imperative prior to succumbing to the putative necessity of horizontally joining forces: a company should analyse its own ability to collaborate. A decision should be made on the basis of a thorough evaluation of other growth or expansion strategies as well as the firm's own experience with alliances, the prevalence of such alliances in the industry (social comparison) and the regulatory, institutional and cultural constraints (see Bronder and Pritzl, 1991, pp. 44-45, Schmidt, 1993, p. 51, Koza and Lewin, 1998, p. 258, Spekman et al., 1998, p. 762). The outcome of this self-analysis should be whether or not it appears feasible for an airline to enter a co-operation, based on its own organisational fitness (see Gulati, 1998, p. 293 and Moss Kanter, 1994, pp. 99-100). Organisational fitness is, additionally, an important component through which carriers can early on assess possible areas of co-operation along the value chain spectrum, and thus deal with the managerial and organisational implications and challenges of partnership action.

A definition of the partnership objectives is crucial. As alluded to earlier in this dissertation, the objectives set prior to entering a partnership, mirror the motivations for utilising this expansion strategy (see 4.3.2). The typical classification of the broad alliance motivators into learning and business alliances, efficiency and effectiveness motivations as well as costs, regulation and market-oriented partnership drivers, has been introduced before (also see Jarillo, 1988, Hamel, 1991, Lei and Slocum, 1992, pp. 81-82, Koza and Lewin, 1998, p. 256). A consideration of partnership objectives based on these motivations includes the scale and scope of the desired collaboration with regard to the value chain elements and the number of partners to be involved. The value or role of company areas in the collaboration must be determined up front, agreements on relative priorities must be reached and the objectives' compatibility with the existing business must be audited and ensured (see Applegate, 1998, p. 54).

Compatibility of partnership objectives and the firm's abilities are a deciding success factor. In aviation especially, it often seems that alliances are entered into based on opportunity and market pressure, rather than harmony with the firm's overall goals (see Walters et al., 1994, p. 5). Partnership objectives, depending on the scale and scope of the envisaged co-operation, must thus be embedded in the airline's strategy. Airlines, for example, frequently establish marketing partnerships. Marketing-collaborative objectives can touch activities, programmes

and strategic issues as well as various resources and organisational topics and market-related dimensions, thus covering a broad bandwidth of company performance (see Töpfer, 1992, pp. 179-182). This comprehensiveness determines that operative and strategic partnerships must consequently correspond and co-evolve with the airline's overall strategy (see Ariño and Torre, 1998). While partnership or alliance strategy is regularly described from an *in situ* or *ex-post* point of view, it is, however, crucial to successfully establish partnership-strategic guidelines prior to entering into collaborative agreements (see Gomes-Casseres, 1998, p. 7). This would also entail that airlines understand their relative power within a partnership. As downright balance of power due to size, financial propensity or other differences cannot be achieved, airlines must evaluate their comparative strength and authority in prospective partnerships and deduce strategic implications.

Equally important as part of organisational fitness is the assessment of individual excellence (see Moss Kanter, 1994, p. 100). The pursuit of future collaborative opportunities must be accompanied by the airline's ability to underscore its own competitive advantages and strengths. Airlines seem to neglect the fact that alliance formation is both a passive and an active process. The deliberate search for a partner is one option. Being an attractive, approachable partner for alliance-seekers is yet another possibility. This passive approach, however, requires an airline to advertise its strengths in a way that it becomes an attractive and valuable ally in alliance structures. The status of an organisation in the industry therefore strongly affects its reputation (for reputation in collaborations, see Dollinger et al., 1997). The greater this reputation, the wider the airline's access to a variety of sources of knowledge, and the richer its own collaborative experience, making it an attractive partner. In the airline industry, the signalling properties of standing are important since the attractiveness of a potential partner can be gauged from its status, which also depends on the other carriers already tied to this partner. This phenomenon has important behavioural consequences. If a carrier's discrete status is likely to enhance the attractiveness of an ally, airlines will have a tendency to seek high-status partners (see Gulati, 1998, p. 301). Individual excellence consequently drives membership of bi- or multilateral airline collaborations.

The ability to co-operate and the partnership-organisational fitness are further based on the staff's personal as well as collective competence and commitment (see Bronder, 1993, p. 20). The agreement on a shared vision and competence in co-operation-related issues promote trust towards the future collaborative orientation and towards prospective partners. Responsibilities, obligations, and compromises contribute to laying the bedrock of a gainful,



long-term partnership and constitute partnership-organisational fitness as well as the ability to co-operate on the staff level. In addition, every partnership can experience conflict between its members, originating from operational frailties or simple, interpersonal difficulties. It is therefore of the highest importance to create a general understanding that company collaboration always goes hand in hand with conflict potential. Sensitivity towards conflict on all staff levels facilitates the establishment of venues for equitable conflict resolution in later stages of the joint business venture.

An initial definition of and pledge to the partnership scope must be reached. While the scope of the partnership has to be established in detail between the partners, an initial scope definition, as part of the organisational prerequisite to entering a partnership, is crucial. This scope definition can therefore entail issues such as geographical boundaries, product and service categories, customer segments, brands, technologies and assets brought to the partnership (for scope of alliances, see Khanna, 1998, p. 340 and for partnership intensity, see 6.4. and 6.5).

Although the most rational approach to building airline partnerships would entail taking graduate steps along a spectrum of increasing partnership intensity, airline experience has shown that this is not necessarily the case. Airlines that have wished to minimise their risks, have opted for a trial stage of minimal integration and have usually been disappointed with the results, therefore further eroding their willingness to attempt greater degrees of integration. Successful airline co-operations appear to require a critical mass of integrating activities, covering a broad range of the airline value chains, and a critical scope of activities. The critical scope of activities would also include geographical reach, product categories, customer segments and brands in terms of the integrative activities being implemented across the participating airlines' full networks.<sup>91</sup>

### **5.3 Partnership Planning, Search for, and Selection of Horizontal Partners**

An appropriate partner match offers the greatest opportunity for partnership effectiveness. The choice of the right partner can yield important competitive benefits, whereas the failure to establish compatible objectives, or communicate effectively can lead to insurmountable problems. Furthermore, the need to understand all partners' similarities and differences is paramount in ensuring the success of alliances. With the web of partnerships emerging in the

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<sup>91</sup> See also further below (6.4 and 6.5) for critical scope with regard to partnership synergy.

airline industry, and the forms and instruments of collaboration taking increasingly different configurations, the appropriateness of partner selection has a critical impact on the alliance success (see Devlin and Bleackley, 1988, p. 21, Bucklin and Sengupa, 1993, p. 32, Dev et al., 1996, p. 12, Hitt et al., 2000, p. 449, Dyer et al., 2001, pp. 39-40).

Due to the limited predictability of partners' behaviours and the costs of opportunistic partner conduct, entering alliances is associated with a certain moral hazard. Rapid changes in the aviation and regulatory environment may lead airlines to alter their specific alliance needs and orientations over time, thus affecting their ongoing partnerships. Discernment is required in building partnerships, because of the need to represent the interests of stockholders and labour groups that have been made certain promises, commitments to airports, debtholders and other stakeholders and obviously vis-à-vis a certain market position that should not be squandered. To build ties that effectively address needs and objectives while minimising the risks posed by the aforementioned concerns, dedicated partnership planning must be implemented (see Gulati, 1998, p. 300).

The first, yet overlapping, sequence of events of partnership building includes investigation and pre-selection (planning and search), partnership fitness evaluation and the final choice of a partner in horizontal airline relationships. As airline collaborations greatly differ in form and depth of integration, partnership planning may have more or less intensive forms. The following descriptions, assumptions and recommendations are exemplary, based on a partnership planning process for a strategically-oriented airline co-operation.

### **5.3.1 Partner Investigation and Pre-Selection**

Just as a person's decision to get married is tied to the availability and eventual choice of a specific partner, an airline's decision to enter an alliance is closely linked to its appropriate partner selection and may even be determined by that partner's availability (see Dacin and Hitt, 1997, p. 3, Gulati, 1998, p. 299). Partnership building starts with the investigation of prospective partners. As indicated earlier, organisational and company-strategic prerequisites as well as compliance with partnership objectives must be met prior to committing to a partnership strategy.

The first step of investigating prospective airline partners is not a very complex task. Airline competitors, however geographically limited they may operate, are reasonably easy to identify due to their inherent market prominence. Route structures, size, equipment, the overall financial situation and market position, are usually well-publicised information. The



same applies to an airline's traffic rights, as these are commonly based on government-negotiated air service agreements. The absolute number of generally available prospective airline partners is certainly determined by the market size and the competition structure. If a partnership-seeker's intention is market expansion, it is obvious that the smaller the market to be entered into is, the fewer the number of prospective partners there will be, all of which naturally funnels the group of possible allies. The investigation process for prospective partner airlines is thus of a less laborious nature than in other, more fragmented and less public industries. Information on an airline's management and strategy, personnel policies and labour relations, its shareholder structure and product and quality-related issues are harder to investigate and often involve more detailed inquiries and even physical inspection. However, in determining whether the investigated carriers can be pre-selected, this information is mandatory and needs to be collected in audit processes which can typically entail the following hard compliance facts:

- Network consistent with the partnership-seeker's expansion and competitive aspirations (complementary/overlapping)
- Size, wealth of partner's markets, relative dominance (leader or follower) and competitors (see Berardino and Frankel, *Keeping Score*, 1998, p. 84)
- Existing partnership agreements
- Endowments of assets (traffic system, routes, brands, hubs, aircraft, and slots)
- Endowment of constraints (labour agreements, national regulations, and bilateral agreements)
- Financial management and resources, and financial indexes (profitability, asset and debt structure etc.)
- Productivity
- Management structures, and managerial personnel
- Growth and development potential
- Reputation of service, safety, punctuality and security

Each investigated and pre-selected partner should meet some minimal prerequisites to bring the desired complementary strengths to the partnership. As most airline partnerships are market expansion and marketing-oriented, complementary and supplementary networks are argued to be the most important criteria in the selection process (see Schmidt, 1993, p. 54, Klein, 1996, p. 14 and, more generally, Harrison et al., 2001). Ideally, the strengths contributed by the partners are unique, although they complement each other. The goal is to

develop synergies between the contributions of the partners, resulting in a win-win situation for both or all (see Walters et al., 1994, p. 5 and chapter 6 for synergies). The basic purpose in the phase of investigating prospective partners is to determine the equilibrium between the desired expectations from a partnership and the potential of a future partner to fulfil these prospects.

Whether an airline discloses its investigation of a prospective carrier's operation to it, depends on the partnership-seeking carrier's strategy. The decision for an open or concealed examination approach in relation to a prospective partner, lies primarily in the competitive environment and whether or not the airlines had previous business links. Nevertheless, it is more common to conduct this very first stage of partnership formation in a concealed manner.

### **5.3.2 Partner Suitability and Selection Based on Fitness Categories**

A final choice of a prospective partner is based on the investigation and pre-selection process. It is usually at this late point that a partnership-seeker discloses its intentions to enter into negotiations on a collaborative agreement to a prospective ally. However, evaluation of the prospective partner is not yet completed. It has indeed moved beyond the phase of testing compatibility on historical grounds, but now enters a stage of intensified critical scrutiny of the partner's soft and less tangible facts, unpublicised information and constraints under which the ally might be operating (see Berardino and Frankel, *Alliances: The Next Step*, 1998, p. 68). The aim is to evaluate - in due diligence processes - whether the partners mutually suit each other, which ultimately enhances the effectiveness of the partnership that may lie ahead.

Partnership suitability, based on relatedness, is often clustered into partner fits or partner match, which describe mutual understandings in specific fields, or the overlap of partnership scope (see Bucklin and Sengupta, 1993, p. 34, Rodermann, 1995, p. 255, Khanna, 1998). The most important of these fields are summarised in the following paragraphs and can serve as a guideline for due diligence and audit processes (for partnership due diligence, see Zhang, 1998 and Applegate, 1998, p. 52 and chapter 6 for audits).

#### **5.3.2.1 Fundamental Fitness**

Partner evaluation of fundamental fitness reveals the results of partner investigation and entails further partnership suitability criteria. Fundamental fit considerations contain issues related to the business environment and behavioural aspects. As part of these considerations,



the partnership-seeker has to evaluate whether the desired collaborative advantages are to be achieved with a pre-selected partner in a specific market and in a certain time frame.

Alliances generate synergies once they manage to combine strengths by eliminating weaknesses. This complementary strengths/weaknesses profile equips associated airlines with a wide range of possibilities with which to increase the value of their companies. A potential partner has to be assessed with regard to its possible contribution to the success of the partnership. Ideally, the partners must qualitatively contribute equally to the overall partnership objectives through their specific business strengths (see Bleeke and Ernst, 1995, p. 99 and Klein, 1996, p. 15). The staff, labour relations, management, financial situation, and organisational set-up of the partnering firms must fundamentally make a sustainable contribution to the collaboration. Furthermore, more detailed information on the airline's product portfolio and marketing organisation (including FFPs and CRSs) as well as brand issues must be gathered and evaluated. In a first step, fundamental fitness must prove the appropriateness of these areas for a possibly successful collaboration.

Risks emanating from the partnership have to be determined in the light of their implications for the planned collaboration and the individual firms. These risks may lie in a potentially aggravating competitive position due to partnership-efficiency- and effectiveness-harming market action and regulatory hurdles (see also chapter 4.5 on critical issues and opposition to airline collaboration). Particularly rivals' legal and competitive actions in defence of their market position, and other, infrastructure-restraining reprisals are almost the norm for airline partnerships. The case of American Airlines and British Airways has, for example, shown an initial lack of fundamental fitness because regulatory opposition as well as industry-wide disagreement has impeded the partnership formation process.

The partnership-seeker has to assess whether the collaboration will create a loyal partner or eventually, after termination, a new competitor. Predictions of this kind are usually hard to make, however, and if applicable, the collaboration track record of the prospective partner can serve as a certain rule of thumb for an evaluation. Additionally, the evaluation process must examine the management's experience with collaborations and their distinct behaviour in partnership situations.

Essentially, fundamental suitability entails the question of whether the airlines involved would discretely or jointly be more successful. Balanced power positions, often claimed to be a key factor of successful partnerships, should however, be questioned generally and with

specific regard to the airline industry (for power imbalances, see Bucklin and Sengupta, 1993, p. 34 and Bleeke and Ernst, 1995, p. 99). Especially the above-described configuration consisting of multilateral partnerships with senior and junior partners, substantiate size-driven power imbalances. These imbalances are an unquestionable fact of alliance building and must be included in the exploration of fundamental partner fitness.

Personal relationship is rightfully mentioned as an integral part of fundamental fitness. The initial establishment of a successful partnership depends on the creation and maintenance of comfortable relationships between executives of the future partners (see Moss Kanter, 1994, p. 99). If chemistry is absent, if personal and social interests between decision-makers cannot be shared, fundamental fitness is at stake.

Ideally, macro-economical and environmental considerations also form part of fundamental partner fitness, since the nature of the environment and the interorganisational context exercises an influence over the development of an alliance. The political and/or ownership relationship between a future partner and its host government can have an impact on the progress. In the case of the KLM/Alitalia virtual merger, the slow privatisation process has - at least partly - lead to the termination of the partnership. Similarly, this applies to the position an airline has in a corporate super-structure. In this case, fundamental fit criteria have to be applied to the parent/holding company as well.<sup>92</sup>

Regulatory considerations also form a mandatory part of partner fit evaluation. The existence of partnership-supporting traffic rights and air service agreements has a strong impact on the establishment and evolution of airline collaborations. However, in some cases, governments only allow carriers of their country to co-operate with airlines complying with the defined requirements. The US DOT, for example, only approves codesharing partnerships between US and foreign carriers once they have proven that the agreement is in the public interest, and that a pre-determined level of safety is met (see United States Department of Transportation, Code-share Safety Program Guidelines, 2000). Nevertheless, it is not only risks that are associated with regulatory fit considerations. In a more liberalised environment, the emergence of progressive market principles can imply new, profitable partnership development options to be covered by fit observances.

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<sup>92</sup> This, for example, applies to the case of the Swissair Group. While Swissair itself was an economically viable carrier, its holding, Swissair Group ran into serious financial problems due to its expansion and portfolio strategy. The bankruptcy of the holding lead to a chain reaction ending with Swissair's demise and the mentioned problems for the Qualiflyer Group of carriers (see Buerkle and Smith, 2002).



### 5.3.2.2 Strategic Fitness

It is widely acknowledged that the concurrence of partnering firms' strategic goals is the central success criterium. This complementary orientation towards a common collaborative long-term target forms the core part of strategic fitness - and, moreover, means the pursuit of an alliance strategy. Strategic fitness ultimately helps to prevent partners in a collaborative venture from behaving opportunistically and destructively while they optimally pursue congruent objectives. Strategic fitness can thus also be seen as an imperative for airlines' co-evolution in partnerships. The ensuing paragraphs illustrate the most prominent strategic fitness criteria.

#### 5.3.2.2.1 General Strategy Fitness Criteria

Business planning and strategic goals should be openly discussed among potential airline partners and reviewed as part of the strategic fit evaluation process. Ideally, the possibility of a comprehensive harmonisation of planning issues in the respective collaborative areas must be envisaged between the allies. Niche collisions, i.e. the result of separate deals producing untenable overlap between co-operation and competition, should a priori be ruled out (see Perlmutter and Heenan, 1986, p. 142).

There has to be a common understanding of mutual benefits with advantages and disadvantages, yield returns, gains and losses to be mutually divided (see Bleeke et al., 1992, p. 120 and Klein, 1996, p. 15). Partnering airlines should have similar or complementary endowments and developmental orientations in terms of market positions, competitive capabilities and strategy. The partnership-seeker ideally assesses itself and the proposed relationship from the prospective partner's perspective. The determination should lead to a clarification of the potential advantages the future partnering airline sees in the partnership (see Devlin and Bleackley, 1988, p. 21).

It is seen as a key prerequisite for alliance success that comprehension of the alliance's payoffs is crucial to the understanding of the fundamental incentives to co-operate (see Parkhe, 1993 and Gulati et al., 1994, p. 61). A mutual orientation in planning issues not only suppresses the tendency towards opportunistic behaviour, and hence the need for further safeguards, but also provides an opportunity for airlines to jointly earn greater rents (see Madhok and Tallman, 1998, pp. 330-331). The competitive significance of a win-win situation developing from complementary resource allocation should thus be explored. Before mutual benefits in airline partnerships can be realised, carriers must demonstrate to each other

that they are fully committed to the alliance. Without this fundamental demonstration of mutual trust, the alliance will not have the resilience to cope with start-up frustrations, inevitable setbacks and changes in the external conditions. The foundation of mutual commitment is the recognition by each partner that the ally brings assets and capabilities that will enable the airline partnership to accomplish what neither can do alone. To lay the foundation for the development of an alliance strategy that is consistent with the individual partner's strategies, each partner must be willing to share strategic information such as cost data, market intelligence and facts on future schedules (see Berardino and Frankel, *Alliances: The Next Step*, 1998, p. 68). This is seen as an early test of trust and commitment and ultimately a sign of strategic fitness (see Walters et al., 1994, p. 7).

A consensus on possible forms and instruments of the collaborative agreements and their developments should be evaluated. In addition, and as indicated earlier, airline partnerships, starting out with a critical partnership mass, often follow trial and discrete stages of co-operation formation and advancement. Agreements should be reached on the general direction and the perceived intensity in developing airline partnerships. Differing ideas on how intensive individual partnership contributions have to be, can lead to asymmetric resource input (see Bleicher, 1992, p. 272). It is important to evaluate compatibility with regard to contribution bundling of the value chains prior to establishing a partnership. The quest for strategic fitness must scrutinise each envisaged value chain collaboration aspect, as well as to which extent the partnership goals can be strategically reached.

Different forms and instruments classically mirror the motivators of each partner for entering the collaboration. It is thus of highest concern to thoroughly determine and accommodate the underlying motivations for entering a partnership. Taking time to understand the future partner's real strategic strengths and weaknesses is important for the evaluation process. Superficial similarities or complementary features can be misleading. This is why it is essential to make an effort to realise the partner's motivations for collaborating.

Closely linked to considerations of forms and instruments of the partnership is compatibility concerning organisational systems with which to manage and stabilise the partnership (see Bleicher, 1992, p. 276 and Gomes-Casseres, 1998, p. 6). Airlines have often entered partnerships in the past without appropriate managerial structures to cope with the demands of maintenance, conflict resolution and the innovative improvements of the collaboration. With carriers increasingly being members of alliances, the existence of such structures can be assumed and must be a requirement of strategic fitness. The consideration of the potential



partner's organisational and management structures and decision-making processes is of key importance.

Power as one factor of fundamental fitness has been mentioned above. Set against the background of forms and instruments as well as value chain connectedness, the development of power constellations in a partnership must receive great attention. Even if power is, or should be, balanced at the outset of the partnership, strengths may change over time, creating a shift and leading to unanticipated configurations. The assumption of managerial tasks, the contribution of key functions and balance of learning and teaching in a partnership can strategically impact on the power equilibrium (see Bleeke and Ernst, 1995, p. 99). Austrian Airlines and Swissair once were equal partners in the Qualiflyer Group of Airlines. However, opportunistic behaviour and different corporate strategies shifted power towards Swissair which, among other issues, lead to the termination of the partnership. Power developments thus should be strategically anticipated to avoid future conflict.

A strategic fit process should also scrutinise the status quo of the prospective partner to deduce a strategic and sustainable aptitude for collaboration. Based on information collected during the identification phase, financial capabilities, dividend and re-investment strategies, employment policies, compensation programmes, hiring strategies, profit and growth orientation and financial and accounting practices should be scrutinised and critically reviewed in the light of the partnership objectives. Convergence should additionally be achieved in key success factor areas such as service quality, safety, image and branding as well as technical competence (see Youssef and Hansen, 1994, p. 418).

The time scale of the collaborative agreement is very important. Airline partnerships, in particular with regard to the changing regulatory environment, are not necessarily perpetual business ventures. An initial idea and possibly an understanding of the individual time horizons of the co-operation and the occurrence of payoffs should be reached. Joint business ventures regularly lack commonly agreed and formulated quantitative and qualitative partnership goals. Accords reflecting the individual expectations regarding the temporal occurrence of partnership returns should be reached to avoid disappointment (see Dacin and Hitt, 1997, p. 3).

Standing out from the narrower definition of strategic issues, but yet part of its managerial and strategic fit implications, is partnership trust. While trust is often argued to be manageable in situ, it must also be judged as a key compatibility component prior to entering a

partnership. Three common elements of trust are uncertainty, vulnerability, and control. The greater the uncertainty surrounding future events, the greater the trust required in reassuring partners of mutually adaptive behaviours in response to unknown future circumstances. This future-oriented view supports the notion that trust has to be determined and established at the outset of a partnership. With global airline networks still being in a partnership building phase, the anticipation of future developments affecting prospective partners is a key strategic fit. Vulnerability describes the loss potential in a partnership. The greater the potential loss by opportunistically exploiting opportunities in an alliance, the greater the trust required. Loss potential, however, hinges around the depth and width of integration in partnerships. A mere block space agreement surely comprises far less loss potential than a partnership incorporating common branding strategies. The third element involves control. The lower the control exercised by one alliance partner over its allies, the greater the trust required from that partner (see Parkhe, 1998, *Understanding Trust in International Alliances*, p. 220).

In summary some of the key general strategic fit criteria to be evaluated are:

- Mutual pay-off/benefits
- Forms and instruments of collaboration
- Underlying motivators
- Managerial structures
- Power status quo and development
- Partner's aptitude to collaborate and to co-evolve
- Time scale/duration of collaboration and materialisation of benefits
- Trust

#### **5.3.2.2.2 Network and Hub Compatibility Fitness Patterns**

Before entering a partnership, the assessment of the prospective ally's traffic network is strategically vital. Analysis of the status quo of the traffic system and the traffic figures<sup>93</sup> has to be carried out with reference to network opportunities relating to the medium- to long-term network development as well.

Network complementarity is a fundamental component of partnership fitness. Whether airline partnerships envisage covering local, regional, international or intercontinental markets,

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<sup>93</sup> Traffic figures analysis with regard to network compatibility can, for example, include the prospective partner's local and international point-to-point traffic and connecting traffic with specific reference to traffic in competition to the partnership-seeker's own network.



individual networks to be merged should always emphasise different geographic zones. Especially in multilateral airline groupings, little or no overlapping route networks result in less friction among partners. The example of Singapore Airlines and Thai Airways, both members of the Star Alliance and serving similar regional markets, has shown overlapping networks of individual carriers in global groupings to be the source of constant member irritation. However, similar network structures can also be beneficial in partnerships, provided that one carrier operates from a hub which holds growth capacities. In this case, the basic objective would thus not be market entry, but rather further penetration to achieve additional frequencies and feeder, as well as defeeder services (see Steininger, 1999, p. 244).

The choice of a prospective partner in a different region or continent for market entry/penetration purposes is directly linked to the choice of the partner's hub. Hubs form strategic gateways to the partnership networks and to un- or under-served markets. The location and size of the hub hereby plays an important role. As a key prerequisite and fitness criteria, partnership airlines' hubs or operating airports should ideally be situated far from each other to avoid inter-partnership competition and cannibalisation. Hubs of partner carriers should incorporate a large enough market and should be situated in regions with sufficient growth potential - preferably business centres or tourist attractions. Growth potential should also apply to the hub airport itself, which in turn is determined by the regulatory framework (national as well as bi- and multilateral) and other, local political, infrastructure and environmental concerns.

The size of an airline's hub operation is directly related to the size of its feeder network. Hubs serving as strategic gateways for global networks require a sufficiently measured traffic catchment area and a well-sized feeder network to take advantage of density effects. Density effects, on the other hand, require slot and gate availability, especially at capacity constrained airports, which then lead to a disproportionate execution of market power - the above-described hub premiums (see Berardino and Frankel, *Keeping Score*, 1998, p. 83). Hub-generated market power should be further audited for partnership fitness with regard to marketing advantages that also lie in the field of economies of information through agency and corporate loyalty programmes.

The quality and attractiveness of a prospective partner's main airport or hub plays another role in evaluating strategic partnership fitness. Transfer passengers enjoy entertainment, shopping and waiting facilities. Business travellers prefer proximity to business centres and possibly business facilities on-site. Well-established intermodal traffic connections, parking

facilities for individual transport, high standards of safety and security directly serve the passengers' core needs. Technical issues, such as ground handling as well as air traffic control, should also be considered while assessing an airline's partnership compatibility.

In summary, hub and network evaluation should ideally include the following aspects:

- Network and hub status quo
- Network overlap or complementarity
- Network development opportunities

### 5.3.2.3 Cultural Fitness

Cultural fitness is increasingly discussed as one of the most important single success aspects of intercultural business partnerships (see Perlmutter and Heenan, 1986, p. 146, Bleicher, 1992, pp. 281-285, Lorange and Roos, 1992, p. 353, Ensign, 1998, p. 665). This notion largely originates from empirical evidence suggesting that cultural mismatch or monocultural settings lead to partnership difficulties and ultimately to failure (see Harrigan, 1988, p. 225, Bittner, 1996).

In this context, culture entails business and corporate cultural aspects, which are largely based on ethnic and societal cultural traits, styles and values. Corporate culture evolves from a firm's previous experiences with transactions and interactions with the environment as well as from its individual business' cultures. Staff contributes to the ethnic and societal component of corporate culture simply through their individual cultural backgrounds and the way they socially interact (see Breuer, 1994, pp. 62-63 and Podsiadlowski, 1998, pp. 196-198). The Swissair/SAA equity and codeshare partnership exemplary summarised the cultural challenges to be met by airline partnerships, whereby the Swiss, an entirely privatised carrier, entered into a reasonably close relationship with an African, fully state-owned airline.<sup>94</sup>

The airline industry in its current phase of becoming more globalised through partnership building, is in particular affected by the need for cultural fitness (see Bissessur and Alamdari, 1998, p. 331). Flag carriers advertising national identities very specifically require a cultural fitness evaluation when entering into culturally distant interairline partnerships (for cultural distance and co-operation implications, see Park and Ungson, 1997). Cultural compatibility should thus be envisaged.

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<sup>94</sup> The two carriers' relationship was dissolved in February 2002 due to Swiss Airlines' insolvency.



Cultural compatibility in airline partnerships basically describes the allies' willingness to accept the counterparts' cultures in order for the collaboration to endure successfully. Factors originating from cultural fitness in particular are the adaptability of goals and strategies, enhanced communication and adequacy in judging the partner's behaviour (see Bruch, 1998, pp. 178-179). In partial summary of these factors, trust can also be a consequence of cultural fitness as it allows the growth of confidence in the partner's action. Building trust may be harder when cultures are highly dissimilar, since homogeneous expectations and shared assumptions about the partnership may not readily exist.<sup>95</sup> However, the greater the similarity of societal and corporate cultures, the greater the knowledge of and familiarity with the airline partner's modes of thinking and behaving may be, hence the greater the comfort level and the lower the learning cost and time.

Most ideally, cultures should assimilate in order to create a new, common business culture. However, the majority of collaborative agreements in the airline industry do not allow for this intense form of culture transformation. This can have several causes. Often, partnership intensity does not require nor support assimilated cultures. Where only operationally, functionally or geographically limited parts of the value chain are affected by the partnership, entire business cultures must not be assimilated.

So far, many airline partnerships that have identified the requirements of cultural fitness, however, have opted for less drastic approaches to deal with individual cultures. Pluralism is seen as an option to handle the challenges of different cultures.<sup>96</sup> The aim is cultural coexistence, but taking a constant adaptation process into consideration. Carriers must therefore endeavour to establish a compatible system of common values and governance styles, in particular in the light of ethnic cultures and national identities (see Bronder and Pritzl, 1991, p. 50 and Perlmutter and Heenan, 1986, p. 146). The evaluation of cultural fitness must scrutinise the applicability of compatible cultural systems and understand the strengths and weaknesses of the partners' cultures in order to fend off conflict.

Among senior staff of both parties and those employees directly dealing with partnership issues, cultural fitness often presupposes a consensus in the ways of doing business. The most

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<sup>95</sup> This context is also used to classify possible trust in business relationships based on societal cultures (see Parkhe, *Understanding Trust in International Alliances*, 1998 and Parkhe, *Building Trust in International Alliances*, 1998, p. 424).

<sup>96</sup> Other reactions to corporate cultural differences, besides assimilation and pluralism, can be culture take-over, subculture split, and culture resistance (see Bleicher, 1992, p. 283 and Schmidt, 1993, p. 79).

often cited reason for inadequate cultural fitness is insufficient means to integrate differing societal and ethnic cultures, both at senior management level and at the front line. Cultural evaluation processes must thus entail due diligence on human capital. The merger between Air Canada and Canadian Airlines - although culturally extremely close - was preceded by a comprehensive assessment of the Canadian Airlines officer corps (see Bell, 2000, p. 106). As indicated before, whether cultures should be assimilated or remain plural, depends on the intensity of the collaboration. However, human traits, styles and values as the bearers of corporate culture should be thoroughly scrutinised in order to understand, learn and accept the counterpart's culture and, ultimately, to mitigate risk (see Podsiadlowski, 1998).

#### **5.4 Final Choice and Configuration of Airline Partnerships**

Once the above-described fitness areas have lead to a positive result for one or the other partner, the selection process is complete. As the evaluation of partnership fitness is usually a bilateral process between prospective partners, the sequence of events to the final choice and the contractual fixation of the partnership is an evolutionary process. This final evolution towards partnership formation is usually strongly supported by interdisciplinary due diligence and auditing tasks, which need to be co-ordinated and comprise one of the last steps towards partnership formation (see Zhang, 1998, p. 57). The next step would thus entail agreements on the configuration of the airline partnership.

In this context, the successful configuration of the airline partnership must most importantly reflect the following issues:

- Co-operation motivation
- Partnership fits

The above-mentioned issues, which have been described intensively (see chapters 4.3.2 and 5.3.2), buttress the entire partnership configuration phase and must be carefully taken into account. Neglect of these components can lead to mis-configuration, conflict and, ultimately, the failure of the collaboration. Again, the structural configuration is directly related to basic motivations for entering the partnership and partner fitness criteria, and must be mirrored by the co-ordination of partnership due diligence or audit processes.

Principally, key success factors for the sustainability of the competitive advantage of the structural configuration of interfirm partnerships are as follows (see Day, 1995, pp. 298-299):



- Durability and not vulnerability of the partnership configuration to rapid depreciation or obsolescence because of the pace of technological change, shifts in passengers' requirements and the changing regulatory environment.
- Barriers of casual ambiguity for competitors in comprehending how collaborative advantages are achieved. These barriers mainly lie in the tacit and explicit knowledge of alliances, the culture and support processes that cannot directly be observed or emulated from the outside.
- Deterrence of duplication of partnership building. Early adopters or first movers in partnership formation build up a significant structural, managerial and organisational know-how and are thus sought-after candidates for other partnerships. Lagging firms who attempt to emulate the first mover's advantage are forced to approach less desirable partners.

These structural key success factors should be applied to the below-mentioned areas.

#### **5.4.1 Collaborative Forms and Instruments**

Careful consideration has to be given to the choice of forms and instruments and thus the delivery mechanisms of airline partnerships. Many modes of airline partnerships that need to be applied to satisfy the varying individual needs of airline collaboration have been described above (see chapter 4.4). These needs originate from the basic motivations for establishing horizontal partnerships and are further characterised by the partner-investigation process and the partnership fitness audit. A description of the range of possibilities of different partnership mechanisms based on motivational aspects would be extensive and complex, given the multitude of individual collaborative objectives. However, some key thoughts with regard to the most gainful application of collaborative measures need to be mentioned.

The decision for or against a specific form and instrument of airline collaboration should follow a sequence of events. After the recognition and definition of motivators for collaboration, the above-described succession of choice and scrutiny of partners should be employed. The decision regarding the most promising modes of interairline collaboration should ideally be based on the outcome of these considerations. However, in most partnership formation processes the alignment of forms and instruments of collaboration with the ally's capabilities and partnership fitness seems to be ignored. A pre-defined goal, i.e. partnership objective, is often linked to a precise idea of the collaborative measure. An airline seeking a behind-gateway codeshare partner to enter a specific market, is certainly a viable objective. In

the process of partnership formation based on this motivation, one step of the sequence of events must always be embraced: the exact form of airline collaboration has to be tied to the partner's individual suitability. In recent years, many interairline partnerships have caused internal friction, because of the absence of basic suitability. Passengers thus did not welcome codesharing agreements, because of different service standards. Basic safety levels could not be met, or unanticipated cultural hurdles lead to disturbances. Only if the partner's endowments of the above-mentioned kind support the establishment of a specific collaborative form or instrument, success is at least partly guaranteed.

The aspect of partnership suitability as a prerequisite for the choice of appropriate partnership instruments and forms is closely related to collaborative uniformity. A further condition for successfully choosing forms and instruments of airline collaboration is thus for partners to act as uniformly as possible in their respective collaboration areas. Airline partners must take their combined assets and deploy them ultimately, subject to whatever constraints they face. Even though the partnership is geographically and functionally limited, resources must be fully and unchangingly deployed within this limitation. Uniform behaviour may, however, face hurdles and the issues are not abstract. Each partner embarks on an alliance with a community of diverse stakeholders, such as passengers, personnel, investors/stockholders and other parties whose interests need to be represented, and who have been given certain promises. However, collaborative action means for partners to ideally give up selected individual procedures in favour of alliance procedures - thus potentially creating friction with interest groups. The action partnerships want to take, may even be at the expense of a particular partner or stakeholder and some of these actions may not be easily reversible (see also Dresner and Windle, 1996. pp. 207-210). For example, one carrier in a multilateral partnership may be asked to stop serving a particular city pair. Once it leaves the market, provides less or no passenger convenience, releases airport slots and its station personnel, and stops selling in the local market, its presence is lost and its opportunity may not be easily recoverable - at least at an economic price. This partnership move might, however, serve the collective overall partnership's purpose and thus be mutually beneficial.

Collaborative forms and instruments must ideally represent comparative advantages for the allied carriers. It is not enough to enter a market to increase share by way of horizontal collaboration, it is furthermore imperative to achieve a leading position vis-à-vis other rivals operating in this market. Marketing tools such as joint sales, common or reciprocally accepted



FFP, unique service concepts and network configurations, can leverage the partners' positions in the marketplace, increase entry barriers and deter duplication.

Managerial, operational/commercial and legal conditions must finally support the decision for collaborative instruments and forms to create an environment that brings to fruition the benefits of the collaboration. The legal background must outfit all partners with the incentives to behave collaboratively and to the highest benefits of the partnership.

#### **5.4.2 Market and Hierarchical Airline Relationships**

Generally, a distinction between two different broad forms of collaborative company set-ups is feasible. One is non-equity co-operation and the other form are equity partnerships up to the point of concentration as indicated by figure 4.1.

There is no particular evidence as to which alliance set-up provides the most collaborative benefits. Some scholars and practitioners regard financial ties as the cement of a relationship. In equity partnerships, partners are more committed to each other, interests are more easily harmonised, and exit barriers, as well as loss potential are too high to discontinue the collaborative agreement. Execution of control through financial links in complex, highly integrative collaborations is consequently argued to be the only mode with which to discipline key partnership resources and avoid opportunistic behaviour (see Schmidt, 1993, p. 63). Financial interest is argued to lead to board level commitment, securing the implementation of mechanisms that safeguard the benefits of the alliance (see Lindquist, 1996, p. 12). Privatisation of airlines and their search for collaborative agreements is often linked to capital investments. The benefits are two-sided. Governmental owners see the share to be purchased as an entry fee into a partnership and a first step towards further privatisation and a possible merger, while the financier's idea of the investment is to enhance the partnership compatibility of the privatised carrier. This example is highly applicable to the 20% stake Swissair bought as a first phase of South African Airways' privatisation.

Contestants of equity stakes between airline partners question whether collaborative interests can be harmonised more easily (see Nuutinen, 1997, p. 9). Unilateral capital linkages potentially hold the danger of perceived power imbalances, which can destabilise the partnership. Furthermore, under the current regulatory and bilateral regime, the holding of majority cross-border investments in carriers is largely not permitted. In turn, minority stakes may not result in the desired entrepreneurial influence on the partnering carrier. Opponents of capital linkages additionally argue that the gluing effect of equity investments is diluted by

the possibility to easily divest from shares on capital markets. These views support the notion that in the current legislative environment capital linkages do not have the potential to stabilise collaborations in a sustainable manner.

Examples of the success and failure of both set-ups are multifarious. Whether Singapore Airline's investment in Virgin Atlantic and Air New Zealand<sup>97</sup>, or British Airways' equity partnership with Qantas lead to sustainable alliance success is difficult to attest. On the other hand, KLM and Northwest's financial ties were dissolved and so was the partnership between British Airways and US Air (for KLM and Northwest's history of capital links, see Tully, 1996). Swissair's intensive partnership strategy through equity links proved to be a failure to the extent that the entire Swissair Group was in jeopardy even before the events of September 11<sup>th</sup>, 2001. As a matter of fact, equity investments in strategic partners increase in a disproportionate manner as opposed to overall partnership building (see table 4.1: Airline Alliance Summary). This suggests that the majority of airlines do not see equity investments as a key requirement to successful partnerships.

On the other hand, the prospects of further liberalisation of ownership rules and the probable consolidation of global aviation may support strategies involving equity linkages. The overall claim of using the current development stage of "competition of groups" (see 2.3.3) as a springboard for entering a "competition of mergers" might be a good reason to become financially involved in a horizontal orientation.

#### **5.4.3 Structural Configuration Requirements for Unequally-sized Carriers**

Collaboration between smaller, regional carriers and larger airlines are much desired, but pose mutual risk, and this is why certain principles have to be taken into consideration.

While in partnership with a larger trunk carrier, a small carrier has to be immensely alert. The reduction of the junior partner to a mere subsidiary of the large counterpart, with little own competencies and control is a fact of airline partnership building but, for obvious reasons, has to be avoided. The business power wielded by the larger partner may result in the destruction of the junior partner's corporate culture, its business self-confidence and its entrepreneurial spirit. Particularly low-cost, niche market carriers have developed distinct corporate values and styles that serve as central drivers for their continuous development and advancement.

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<sup>97</sup> Singapore Airlines' investment in Air New Zealand (ANZ) involved a write-off due to the collapse of ANZ's subsidiary, Ansett Australia, and subsequent government recapitalisation.



These soft factors are important motivational aspects and champion employee commitment (see Freiberg, 1997, p. 171). In turn, it is especially these distinct features that larger carriers seek in allying with smaller counterparts. Southwest Airlines, for example, rigorously shunned entering into any agreement with a larger carrier, as it saw its corporate philosophy being at risk. In the case of a non-equity partnership, and where no brand or other integration is envisaged, both partners have to ensure that the smaller partner's business self-confidence and independent corporate characteristics remain intact by all means possible.

It is widely known that smaller regional carriers operate at lower unit costs than their larger counterparts, which is one of the reasons why they are able to serve routes that are unattractive to larger airlines (see Barton et al., 1994, p. 31 and Doganis, 2001, pp. 126-162). However, regional carriers might, from their comfortable position of being allied with a trunk carrier, neglect their own cost management. Since their cost-effective operation is one key incentive for a trunk carrier to enter into an alliance, carelessness with this attribute has to be avoided. Possible means of doing so are detailed contracts with specifications regarding organisational standards and controlling mechanisms safeguarding sustainable cost discipline.

Incumbents are often required to collaborate with a number of smaller carriers to gain access to various low volume markets. It is important to stimulate partnership-wide competition between these carriers, even though they operate in different geographical regions. Inducing competition among junior partners enhances the negotiation position of incumbents and increases efficiency of the small carriers. Incumbents should, moreover, influence their junior partners in such a way that they defend their home market or gain a competitor's share and feed it into the network of the allied carrier. This essentially means that a regional carrier should ideally operate exclusively for its senior partner and to avoid passengers being lured from the home market into the competitor's market. If a regional carrier does feed traffic to a competitor's hub, it needs to be guaranteed that the feeder traffic does not offer attractive interline connections to a competitor's long haul flights that are in direct competition with the partner's flights on these routes<sup>98</sup> (see Steininger, 1999, p. 232 and example *ibid.*).

However, a limited number of smaller carriers are in a reverse competitive and negotiation position. British Midland, for example, being a medium-sized airline with revenue of approximately USD 1 billion, controls a significant number of peak-time slots at Heathrow

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<sup>98</sup> Eurowings, now a Lufthansa ally, had been feeding traffic into Air France and KLM's networks, but discontinued this in the light of its alliance with LH.

airport (see N/A, Airline Rankings - Financials, 2000, p. 72 and Feldman, Code-sharing Promiscuity Pays, 1997). This asset obviously leaves the carrier vulnerable and brands it as an attractive partner for airline collaborations. Larger carriers thus have to consider the asset-based strength of British Midland in their partnership negotiation and configuration process. Therefore, exclusivity speculation has to be surrendered in lieu of more market access motivation. This applies to the South African market as well. While both the competing Lufthansa and Swissair have partnership agreements with the local SAA, SAA's feeder service supports directly contending intercontinental routings out of Johannesburg to Frankfurt and Zurich.

#### **5.4.4 Route Structure and Network Design**

Network compatibility has been given detailed attention with reference to the strategic fitness of partners, as network suitability is seen as an imperative at the outset of a partnership. Individual partner's networks need to be adjusted to the overarching necessities of the collaboration, while demands on network reconfiguration increase with the intensity of the partnership. Partnering carriers in close co-operation should consequently realign their route networks accordingly to take advantage of existing and potential benefits from the alliance. The notion of networks as comparatively static constructs thus has to be given up in favour of a concept of flexible routing adjustment processes within collaborative agreements (see Dresner and Windle, 1996, p. 207-210). Whether individual networks are complementary or overlapping, equal or differently sized, certain requirements regarding common network design emanate from the status quo of the individual networks.

##### **5.4.4.1 Overlapping Networks**

Overlapping networks commonly occur when partners serve the same or similar national or regional, as well as main international or intercontinental trunk routes.

Network redundancies have to be re-designed in a way that passengers can be offered an attractive product and that other, cost- and revenue-oriented collaboration motivations can be best achieved. Based on the assessment of the extent of network congruence, servicing of overlapping routes has to be re-assigned to one partner, arranged in a revolving structure or, if supported by passenger numbers, can be invariably operated by both or all partnering airlines. Frequencies should ideally be adjusted, taking the availability of other flight equipment that can be utilised, and guaranteeing highest load factors, into consideration. Specific attention should also be paid to schedule issues, such as attractive timing of flights and quasi or real



online connectivity within the banking structure. Fares of partnering offers are to be harmonised and the distribution of the realigned network must ensure equal treatment of the operating carrier.

The goal of these actions is to increase the attractiveness of the jointly offered air transport service in order to avoid cannibalisation of the partners' offers. However, and especially at capacity constrained airports, network harmonisation can lead to confrontations regarding the allocation or distribution of key assets, such as slots and gate space. A carrier withdrawing from its slots in favour of a partnering airline should most ideally receive compensation either in the form of other routings, or by an allowance from the profits from the formerly served destination. However, agreements of this kind should be precisely negotiated and contractually fixed in order to avoid opposition or disappointment.

The effects on competition of joint network design are, however, evident. Partnership alignment of formerly overlapping networks leads to drastic reduction, if not elimination, of competition. Partners have to be aware of the negative effects that their co-ordinated behaviour might have on consumer welfare, which could likely lead to action by competition authorities. In the local German market, the partnership between Lufthansa and Eurowings has sparked a response from the German cartel and competition surveillance authority, Bundeskartellamt. The erstwhile competitors monopolised 4 domestic routings, adding to 66 out of 86 domestic markets served by Lufthansa without competition<sup>99</sup> (see N/A, Pressemeldung des Bundeskartellamtes vom 06.03.2001).

#### 5.4.4.2 Complementary Networks and Multiple Connections

If the partners' networks are complementary - which is most desirable - a multipliative instead of a mere additive joint network structure must be aimed for. This integration effort has to maximise (quasi) online connections offered by the partners. Online connections should therefore be higher in number than the sum of the destinations served by each alliance partner - a mathematical equation which can be accomplished by co-ordinated partnership hub and spoke networks resulting in multiple hub structures (see Oum and Taylor, 1995, p. 25).

This goal might require the alliance carriers to alter their international route structures and emphasise alliance hub-to-hub routes (see Dresner and Windle, 1996, pp. 207-210). Hubs and

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<sup>99</sup> In order for the partnership to be officially acknowledged, Lufthansa had to compensate another domestic carrier with frequencies and marketing support.

gateways can be affected by a partnership in such a way that an ally has to abandon its current routing structure to serve new partners. This is usually only the case for smaller carriers. However, the possibility of route adjustment in favour of partnership objectives is part of the configuration process of complementary networks. Aer Lingus once hubbed through Amsterdam's Schiphol Airport, feeding medium haul traffic into KLM's network. After the decision to join Oneworld, Aer Lingus had to restructure its network and feed passengers into British Airways' hub at London Heathrow (see Doganis, 2001, p. 220).

It is a complex task to align large carriers' collaborative complementary networks operating their own hub structures, in order to build a continental or global network with multiple hubs. The main objective is to offer a range of O&D online, or direct connections that can be served more attractively by an alliance network than by individual carriers. Transfer traffic plays a vital role in merging networks. Flights to a partner's hub should be scheduled in such a way that they fit into the partner's banks of flights to ensure best possible connectivity (see Martin et al., 1997, p. 57). Double connect markets are a principal focus point. These are O&D connections between partners' non-hub airports and other non-hub airports via their respective hubs. Lufthansa, for example, offers beyond-gateway codeshare flights from Frankfurt to Bangkok and onwards on Thai Airways to Melbourne/Australia. Besides the requirement of an efficient connection between the strategic partner gateways, such as short total travel times, high seat capacities and high frequencies, sophisticated network configuration in the Lufthansa/Thai Airways connecting market has to typically ensure:

- Attractive departure timing in Frankfurt
- Maximised online connectivity - little stopover wait time - for transferring passengers in Bangkok to Melbourne
- Schedule alignment and capacity allocation of Thai's Bangkok defeeder service for locally or regionally connecting passengers originating in Frankfurt
- Attractive scheduling and capacity allocation (compatible to its bank structure) of Thai's feeder traffic with the intercontinental flight to Australia
- Favourable scheduling of the outbound flight to Melbourne
- Attractively scheduled and functioning defeeder services in Melbourne

The example demonstrates the various demands on network development in a multilateral partnership, which are further complicated by time shifts and lags as well as infrastructure constraints. New market development should consider these harmonisation challenges as well as size, growth potential, passenger mix, and competitors in the O&D markets. On the basis



of an evaluation of these factors, an alliance network must determine whether a specific destination can offer all allied carriers a satisfactory outcome, or whether the connection should be left to other partners or to competition. However, if traffic volumes in O&D markets, satisfies the servicing via different partners' hubs, connecting traffic within a partnership should be multilaterally synchronised (see Steininger, 1999, p. 265). This is, for example, the case in Star Alliance's Frankfurt-Melbourne connection via Bangkok on Thai Airways and Singapore on Singapore Airlines. Partnerships concentrating too much on single and double connect markets, should, however, be cautious since new entrants might enter the market and service these routes directly. On the other hand, connecting traffic might often be the only way to compete in markets where direct O&D links are not feasible (see ter Kuile, 1997, p. 68). Partnership networks have to find a balance between these constraints and the obvious challenges.

#### 5.4.5 Contractual Design

Partnership contracts serve at least two purposes. They are firstly a contractual stipulation of the terms and conditions of the partnership and, secondly, coercing the members to intensively busy themselves with the details of the motivations and goals of the collaboration. However, contracts per se do not guarantee alliance success. The eventual value of a partnership contract depends on the original partnership fitness, which is partly based on the individual objectives of the collaboration. Contractual design can certainly create a legal environment supporting accurate collaborative behaviour, but it cannot cover an embedded partnership mismatch and lack of objectives.

Contracts can be centrally negotiated and designed by the future partnership management body or de-centrally by the departments involved in the co-operation. Core issues of a partnership contract are:

- The legal set-up and/or incorporation of the partnership
- The stipulation of the goals of the partnership
- Details of the temporal dimensions (total duration, target accomplishment)
- An agreement on the exclusivity of the contract, i.e. exclusion of other, similar collaborations within a certain geographical region or with particular competitors
- The functional and proprietary stipulation of the dedication to the input production factors, investments and services, human resources and skill areas that are to be contributed by the partners (see Gahl, 1990, pp. 40-41)

- The governance, management structure and instruments of co-ordination activities, such as dispute resolution, reporting systems and collaborative working groups
- The allocation of benefits and other forms of compensation
- Details regarding the withdrawal of a partner and/or the dissolution of the partnership

A partnership should ideally have a limited duration, which needs to be specified in the contract. It is most desirable to contractually fix long-term partnerships, as the length mirrors the intentions, emphasises the commitment, and supports the stability of the alliance (see Berardino and Frankel, *Alliances: The Next Step*, 1998, p. 71). As partners cannot be forced to stay permanently in the partnership, and economic and environmental changes might call for the termination of the collaboration, cancellation clauses with notice periods have to be formulated. These clauses are not merely legal necessities, but additional tools with which to establish partnership permanence and to avoid hasty termination. Notice periods thus have to be well thought out. Periods of only some months do not warrant allies staying within a partnership, as they do not represent a temporal sanction potential. Being aware of the immanent dangers of short contract and notice periods, KLM and Northwest Airlines have contractually fixed their joint operation at a 10-year period (see Nuutinen, 1997, p. 8). In contrast, allies may desire swift dissolution as internal or external changes demand different contractual terms, or a new composition of the partnership. These contrasting requirements of stability through contract periods and the necessity for rapid escapes have to be well balanced in the contractual design.

Another form of contractually induced stability derives from contract penalties. The claim to established partnership longevity can be made once penalties or contingent claims are severe enough to manifest a viable exit barrier for partners unilaterally cancelling or breaching the contract, or to preclude ejection (see Berardino and Frankel, *Alliances: The Next Step*, 1998, p. 71). Break-up fees are to be paid by the leaving ally to its partners as compensation for the lost alliance opportunity. These are similar to contract penalties but they have a less penalising character. Conversely, penalties can also be payable to carriers as a compensation once they are asked to leave the partnership. Ejection penalties are additionally perceived to stabilise airline partnerships, as they motivate enduring partnership composition. Legal stipulations in the partnership agreement that inflict penalties for a lack of collegial behaviour, or authorisation of violative behaviour, thus represent legal safeguards which, in turn, deter opportunistic conduct (see Parkhe, *Building Trust in International Alliances*, 1998, p. 426).



Nevertheless, the notion of sanctioning notice periods and contract penalties has to be critically evaluated, especially in light of the sequence of events to be followed in establishing an interairline partnership. Ideally, a dedicated organisational fitness and partnership compatibility assessment should result in the selection of a viable and trusting partner, thus not requiring any legal sanctions or penalties. However, the current status of legal stipulation in airline partnership agreements proves that risks, mistrust and perceived inherent instability associated with horizontal collaboration need to be overcome by contractual design.

In contrast to penalties and sanctions, partnership contracts should positively motivate the stability and prosperity of the agreement. The incentives can be various and are closely linked to the forms and instruments of the collaboration. KLM, for example, pays its partnering regional and commuter carriers higher profit shares if they schedule their flights to Amsterdam in a favourable way (see Steininger, 1999, p. 353).

Contractual design should also include modes to guarantee equitable terms between small and large airlines in the partnership. Power imbalances might result in a constant threat to small carriers to lose control as well as autonomy and economic potency to the bigger partner (see Bucklin and Sengupta, 1993, p. 39). The larger partner can redress this by offering economic support by means of operational and commercial aid. These stabilising features can include possible loans, e.g., to purchase new equipment, or consulting support in areas such as marketing and IT.

Contracts can never sufficiently stabilise an alliance on a long-term basis. Legal agreements must decrease potential misunderstanding and consequent misbehaviour in a partnership, help to build and increase trust and finally leave sufficient room for constant adjustment vis-à-vis the changing market environment (see Hamel et al. 1989, p. 134).

## **5.5 Airline Collaboration Governance Structure**

As the importance of partnerships has grown, so has the necessity for strong management leadership, especially in balancing individual airline interests with the demands of global alliance membership. The set-up of the partnership management organisation is essential to delivering the promised value proposed by the partnership. This is because an alliance, in contrast to a merger, does not provide unified decision-making authority, and the decision processes are bound to get more complex in multilateral partnerships. The following sections touch some key prerequisite issues of governance structures in interairline partnerships.

### 5.5.1 General Configuration Characteristics

Organisational studies scrutinise the diversity of partnership structures within organisations and view structure as a mechanism to manage uncertainty. Other research on contract choices in alliances and the extent of management structures and the hierarchical controls they embody, have been primarily influenced by the focus on appropriation concerns in alliances, which originate from contracting hazards and behavioural uncertainty at the time of their formation (see Gulati, 1998, p. 302 and Park and Ungson, 2001, p. 37).

The logic of hierarchical controls as a response to appropriation concerns is based on the ability of such structures to assert control by authorisation, enable monitoring and align incentives. The fact that an airline may have entered a wide array of partnerships also suggests that it needs to simultaneously manage this portfolio and address conflicting demands from different partners. Furthermore, if a carrier is at the centre of a network, it must pay particular attention to a series of strategic and organisational issues. Developing such a portfolio perspective on alliances merits further consideration especially since many carriers are now located in an array of partnerships. In addition to this, other *ex ante* factors play an important role in evaluating the appropriate set-up of governance structures. It is thus seen as a key principle to successful partnerships to clearly define a strategy and assign responsibilities to partnership collaboration management (see Walters et al., 1994, p. 7).

While organisational and partnership fitness as well as configuration deal with underlying prerequisites for carrier partnerships, co-operation governance describes the organisation of authority to develop, create, steer and control a collaboration *in situ*. Suitability evaluation functions are preparatory tasks, however, they also represent managerial challenges that need to be supported by appropriate structures. As a second sphere of collaboration governance - the links to the partnering firm, and the development of the partnership - also needs to be organised. Only once the connection to the collaborating partner follows organisational principles, can the relationship capital be exploited and the partnership be successfully advanced.

The organisational set-up of partnership management can typify various forms and differs with the carriers' sizes, the instruments of collaboration and their depth, power asymmetries, interdependencies and other *ex ante* factors. In some cases of horizontal airline collaboration, no governance structures have been formalised and management and adjustments of the partnership are made on an *as-needed* basis. Partnerships are declared to be at risk of



becoming no more than a haphazard collection of firms with limited benefits for the participants without a collective governance structure (see Gomes-Casseres, 1994, p. 66). A dedicated partnership management function is seen to be a key prerequisite of successfully governing collaborations. This dedicated function co-ordinates all partnership-related activities within the organisation and is charged with institutionalising processes and systems to improve knowledge management, increase external visibility, provide internal co-ordination and eliminates both accountability problems and intervention problems (for partnership knowledge management strategies, see e.g. Mowery et al., 1996, Inkpen, 1998, Leibold et al., 2001). The success of alliance management has been empirically proven. Enterprises with a dedicated partnership governance function achieve a 25% higher long-term success rate than those firms without such a function (see Dyer et al., 2001, p. 38).

In summary, no specifically pre-defined set-up is necessarily a recipe for the gainful organisation of managerial structures. Flexibility towards the challenges in all of the partnership's life-cycle phases is a key requirement (see Spekman et al., 1998, p. 663). Basically, a management model has to be chosen in which the possible benefit potential surpasses the costs of increased conflict as well as complexity and therefore the costs of co-ordination. An integral demand for a successful collaborative management organisation is to find a division into internal - intra-firm - and external - interfirm - tasks, thus dealing with the administration of preparatory and procedural roles.

### **5.5.2 Internal Management Organisation and Control**

The internal organisation of partnership management varies with the size of the airline, the extent of the partnership, both qualitatively and quantitatively, and the very strategic importance horizontal partnerships are given as part of the airline's overall business. To describe structures of collaboration management individually would thus be a task of organisational sciences. At this point, some key aspects of internal collaboration management are introduced, which can be generally applied to airline partnership management structures.

The most important internal organ is a co-operation steering committee (see Klein, 1996, p. 15, exemplary for Lufthansa's partnership governance). The steering committee defines goals of the partnership, the general alliance strategy as well as the global positioning of a possible network. Committal tasks thus form part of an airline's organisational fitness. Steering committees can also be charged with creating manuals and guidelines with tools and

templates to help to manage specific aspects of the partnership life-cycle.<sup>100</sup> While most airlines have, as part of their corporate organisational structure, some form of corporate development and network management department, the steering committee acts as a project management device in preparing, and ultimately launching, a particular partnership.

Intra-firm line managerial and corporate supporting functions are thus co-ordinated and duties are assigned. Markets to be entered into, or further developed by means of a partnership, are scrutinised as well as prioritised and possible forms and instruments of co-operation are discussed. This decision is based on marketing, operations, technology, labour and regulatory issues (see Spencer Stuart, 2001, p 81). With regard to market-related issues, some carriers have appointed alliance management positions with a specific geographic focus. On the basis of the steering committee's tasks, partners can be pre-selected. In a next step, suitability or partnership fitness is scrutinised, also with the aid of further supporting functions. The steering committee thus incorporates preparatory duties and devises further steps for prospective interairline collaborations.

First talks on the partnership and a further assessment of the required partnership fitness are usually performed by the executive boards of both carriers. The executive boards thus usually discuss strategic issues and the negotiating parties determine further regulations and the direction of their partnership. Supporting functions define configurational aspects and design the partnership contract under the general supervision and guidance of the steering committee. The steering committee's tasks after the contractual and operational completion of the collaboration are to monitor the initial results and to report to the executive board. In many cases, the steering committee dissolves shortly after the initial phase of partnership operation.

To constantly promote and advance partnership issues, an internal partnership management organisation serves as a knowledge pool and governance entity within an airline. While steering committees regularly dissolve after having successfully established an alliance, a permanent partnership management department needs to be charged with capturing the tacit and codified knowledge of partnership building, management and dissolution. Manuals prepared by steering committees can be further refined, training programmes in alliance governance issues, or platforms for internal networking among staff involved in the partnership can be

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<sup>100</sup> Such templates can, e.g., include guidelines for designing the business case for a partnership, a partner evaluation form based on partner fitness, negotiation templates outlining the roles and responsibilities of different departments, tools to measure partnership performance and a collaboration-termination checklist (see Dyer et al., 2001, p. 39).



proposed. Staff and line management should be given access to information on particular issues, types of partnerships, or phases of partnership life-cycles in order to make appropriate decisions. Internal co-ordination is another important task of inward partnership management. This task would comprise requesting the resources necessary to support the airline's partnership initiatives by having the organisational legitimacy to reach across divisions and functions (see Dyer et al., 2001, pp. 40-41).

Consistent partnership controlling is ideally performed by a dedicated organisational entity embedded in the internal partnership management organisation and ultimately in the overall airline management organisation.<sup>101</sup> This partnership controlling function incorporates surveys on the income and costs of partnerships through benchmarking processes incorporating both internal and external views and goals on the collaboration. In addition to this financial evaluation, issues like franchise audits, security and safety standards audit, airworthiness and customer service can form part of controlling processes. To achieve these objectives, each co-operation ideally is equipped with business plans on the basis of the economic, strategic, generally quantifiable and qualitative partnership goals, which are compared with the actual situation. Additional information originating from the partnership operation supplements the data requirements. According to plans and the discrepancy indexes for achieved network, sales, quality and capital, success can be determined. Alliance controlling is an important function and success factor and its results can be used as a basis for decisions on further developments of the single partnership or multilateral extensions (see Netzer, 1999, p. 226).

Figure 5.2 illustrates the functional delineation of alliance controlling.

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<sup>101</sup> Evidence suggest that 76% of all companies in a survey that form partnerships have some kind of formal metrics in place to assess the partnership performance (see Dyer et al., 2001, p. 41).

of interfirm partnership management is to provide a balanced communication and working platform, to be flexible towards changes in the partnership and to allow for swift conflict resolution. Co-ordinating strategic priorities among partners is another purpose of this management organisation. A partner company's individual initiative, e.g., in establishing an Internet-based distribution system, might be in conflict with the overall collaboration. Partnership management must thus alleviate or solve conflicting strategic action among allies. In addition, mechanisms for communicating which partnership initiatives are most important to achieving the overall strategy need to be established (see Dyer et al., 2001, p. 41).

External management of multilateral partnerships and umbrella brand concepts are somewhat more complex. In the case of the Star Alliance, an independent management company<sup>103</sup> has been jointly incorporated with distinct hierarchical structures. Corporate duties as well as line management functions are individually assigned to committees, whereby the respective function leaders are permanently delegated (see Feldman, *Making Alliances Work*, 1998, p. 30). The committees are generally recruited from members' managerial staff and/or from the strategic business units. Depending on the importance of the functions, appointments can be semi-permanent to permanent. The reasons for this set-up are obvious. Partners in alliances want to participate actively and permanently in the process of production and allocation of the partnership's benefits. Additionally, the conception of neutral, unbiased and non-discriminatory partnership behaviour can best be realised by contributing individual mandates in multilateral committees.

A further demand made on highly integrative partnerships is to ensure continuity in bonding personnel responsible for the interface between the firms and the partnerships (see Gulati, 1998, p. 307). A salient operational challenge to this type of partnership management organisation is, however, to remain flexible towards industry and cyclical changes and to have structures and governance that allow for growth. The tasks of the committees differ according to line managerial and corporate orientation. Whereas line management functions incorporate duties that mirror core functions of the individual carriers, corporate functions are attributed to the external partnership organisation as an autonomous business organism. The entire organisation reports to a Chief Executive Board, or an Alliance Management Board, which consist of top-level management from the partnering carriers.

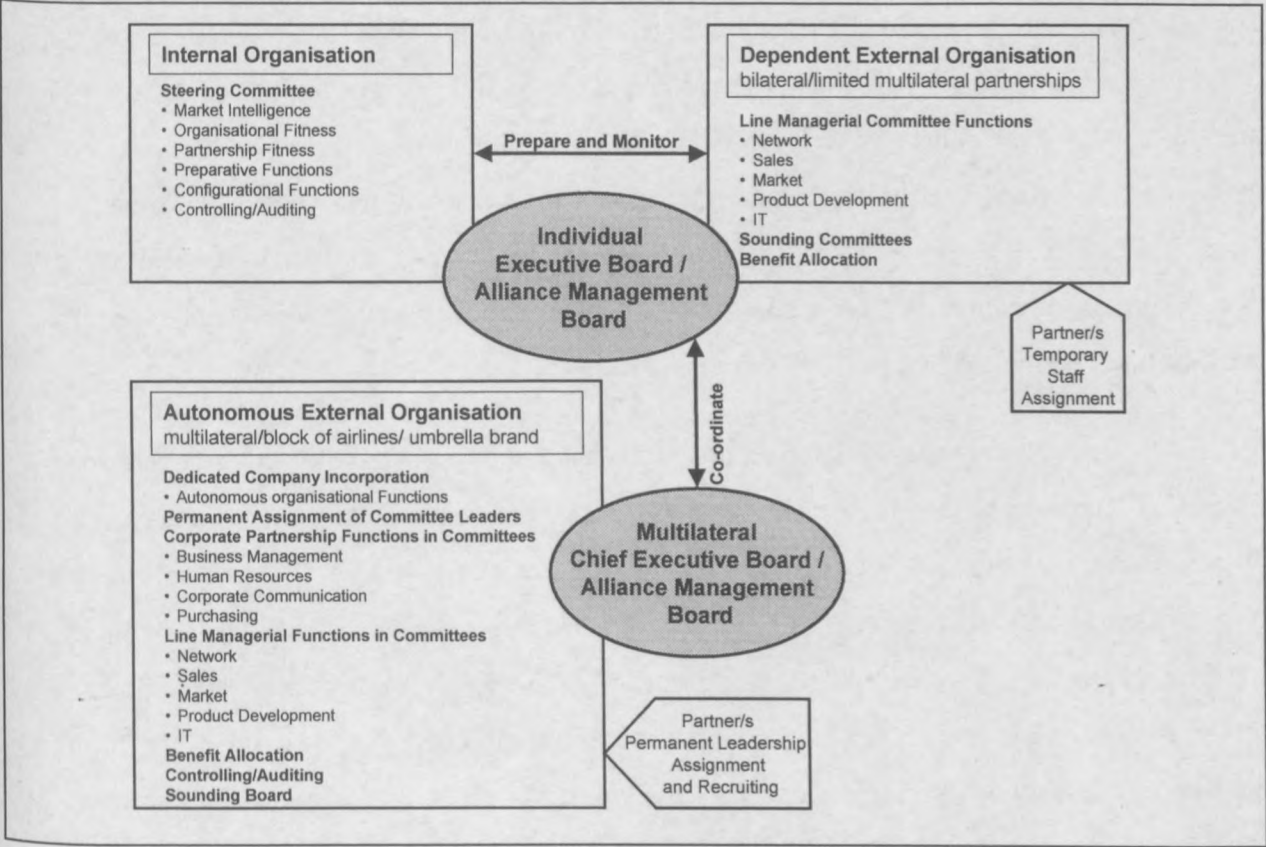
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<sup>103</sup> Star Alliance Services GmbH with three core business units covering: products and service, commercial, loyalty and marketing.



Figure 5.3 describes the set-up of a typical internal as well as external alliance management organisation from a single airline's perspective. The external organisation is mentioned in regard of both bilateral and umbrella brand partnerships as they might occur simultaneously.

Figure 5.3: Partnership Management Organisation



Source: own compilation

5.6 Airline Collaboration Safeguards – Selected Key Areas

Company co-operation is never automatic and thus must be structured to provide incentives for performance. To protect against the hazards of opportunism, airline transactors may employ a variety of safeguards. The purpose of safeguards - as control mechanisms to induce the perception of fairness and equity - is to provide the control and trust necessary for allies to believe that engaging in the partnership will give them a competitive edge (see Dyer, 1997, p. 537). Generally, safeguards can entail managerial issues, which have been described above, but also configurational aspects, which are scrutinised below.

5.6.1 Trust and Avoidance of Opportunistic Behaviour

Trust has been repeatedly mentioned with reference to suitability criteria and the need for the establishment of a partnership management organisation. The existence and degree of mutual trust and understanding between allying parties are two of the key success factors of stable

partnerships (see Lorange and Roos, 1991, p. 60, Hosmer, 1995, p. 379, Birnberg, 1998, pp. 421-428, Gulati, 1998, p. 307, Cullen et al., 2000). Trust has consequently been examined in a wide variety of organisational and social settings and, accordingly, conceptualised in different ways (for an overview, see Hosmer, 1995).

The role that trust plays, and the degree of trust required, vary with the orientation and the type of the relationship as well as the individual people level. For a general comprehension of trust in relational exchanges, it needs to be understood that trust is a human matter - because individuals as members of organisations, rather than the organisations themselves, trust (see Koza and Lewin, 1998, pp. 258-259, Zaheer et al., 1998, p. 124). To better appreciate this, three common elements of trust definition can be considered (see Parkhe, *Understanding Trust in International Alliances*, 1998).

The first element involves uncertainty. The greater uncertainty surrounding future events and a partner's responses to those coming events, the greater the trust required. Trust plays the role of reassuring partners of mutually adaptive behaviours in response to unknown future circumstances (see Cullen et al., 2000, p. 225). The transitional status of the airline industry, which is characterised by deregulation and consolidation as well as cyclical developments, results in an unstable context for partnership-seekers and alliances. Certainty regarding future developments cannot be achieved comprehensively. This is why managerial and organisational structures in interairline partnerships need to establish supporting measures in order to decrease uncertainty and to amplify trust.

The second element involves vulnerability (see also Hosmer, 1995, p. 390). The greater the potential loss through a partnership, the greater the trust required. Highly integrative partnerships, i.e. airline franchise agreements or umbrella brand/superbrand concepts, represent large loss potentials for participating carriers. While high integration is seen as a binding factor, it also obligates partnership trust in order to reach the desired collaborative intensity. This trust to proceed jointly on a partnership route must be constituted prior to entering a collaboration, as the perceived benefits will only surface once a partner believes in a particular partnership structure. In this sense, trust lowers the perceived likelihood that opportunities representing significant vulnerability will be exploited by an airline partner, and it permits better sharing and greater specialisation of resources.

The third element involves control. The lower the control exercised by alliance partners over others, the greater the trust required from the partners and vice versa. As a consequence,



negotiations for control mechanisms are less costly under conditions of high inter-organisational trust, because agreements are reached more quickly and easily as parties are more readily able to arrive at a satisfying conclusion (see Zaheer et al., 1998, p. 125). If partner control is not desired, or partnership discipline cannot be monitored, confidence in the partners is indispensable. In contrast to hierarchical organisations, control in partnership organisations is more difficult to execute. This is especially the case in standardised and loosely collaborative forms and instruments. Simple codeshare agreements, or other marketing and sales co-operations are easy and quick to implement, but difficult to control. Demands to and challenges of adequate control increase with the intensity of the partnership and the number of allies and might result in control gaps. However, in defiance of concepts propagating trust as a substitute for control, this control gap needs to be filled by adequate managerial solutions, of which some have been described above.

These elements lead to interrelated roles of trust in inter-organisational exchanges (see Aulakh et al., 1997, p. 167). Trust can thus deter opportunistic behaviour, as confidence will lead to partners passing up short-term individual gains in favour of the long-term partnership interests. A second result of trust is its at least partially substituting effect on hierarchical governance, when ownership-based control is not viable or economically feasible. The last role of trust originating from the above, is its market performance and efficiency implications.

The preceding elements and roles characterise trust, but it remains to clarify how trust can be generated. The forms of trust production in partnerships can be multifarious. Measures generating trust can be classified into process-based trust, characteristic-based trust and institutional-based trust (see Parkhe, *Building Trust in International Alliances*, 1998).

Process-based trust is founded on the consistency of an airline's past collaborative behaviours and tends to generate expectations of predictability and an impression of trustworthiness (see Aulakh et al., 1997, p. 168). A trust-producing mechanism that lies within an airline's management control deals with meeting expectations of a continuing, mutually productive relationship in the foreseeable future. These expectations of future profits and stable relationships promote present co-operative behaviour and are positively related to the market performance of the partnership. Long partnership contract periods can thus potentially cast a shadow back, generating trustful behaviour (see Parkhe, *Building Trust in International Alliances*, 1998, p. 422). The shadow of the future is tied to the alliance's time horizons, frequency of interactions, and behaviour transparency. Long-lasting negotiated partnership

life spans refer to a far-sighted outlook towards a collaborative relationship and reflect that high value is placed upon future payoffs from the relation.

Characteristic-based trust requires information about the partners and can thus serve as a psychological explanation for the detailed evaluation of partnership fitness (see Aulakh et al., 1997, p. 170). International airlines seek partners that may be quite dissimilar in their background characteristics. Two of such characteristics are societal/ethnic cultures and corporate cultures of partnering firms (see 5.3.2.3 for cultural fitness). The greater the quality of being culturally alike, the easier societal and business interaction. Conversely, trust building may be harder when cultures are highly dissimilar, since homogeneous expectations and shared assumptions about the partnership may not exist as readily. It is important to realise that with sufficient investment of time and effort, the obstacles to trust building, imposed by differences in characteristics, can be effectively managed.

The discussion above suggested that process-based trust may arise from past or future interactions, and characteristic-based trust may arise from attributes of a partner, such as societal and corporate cultures. But each of these requires detailed, specific, non-transferable information regarding a partner. However, this information is not always available and fast-changing circumstances can quickly render accessible information outdated. Another way - institutional-based trust - relies on trust generation through formal mechanisms. The more assured a company feels that its alliance partner will follow through on its promises, the trustworthier, by definition, the partner will be.

The first mechanism - seeking to prevent wrongdoing before its occurrence - requires a display of good faith on both sides. Each individual airline or the partnership organisation can take actions that lock it into the alliance and create costly obstacles - exit barriers by means of penalties and contingent claims - to casually abandoning the relationship. For example, non-specific assets, such as aeroplanes, are salvageable if an alliance breaks down; such assets therefore provide no clear cues about the desire to co-operate or to cheat. But alliance-specific assets, such as customised IT systems, branding, product design, co-ordinated schedules,



networks and slots are not easily re-deployable. These assets act as a hostage that coerces carriers to remain in their partnership and behave collaboratively.<sup>104</sup>

The second mechanism of institutional-based trust seeks to promote concerted behaviour by reducing potential gains from deception through prospective punishments after the incident. Opportunism can be deterred through contractual safeguards or legal stipulations in the partnership agreement that inflict penalties for lack of co-operative behaviours or authorising of transgressing behaviours. By anticipating at least some of the possible contingencies, and by stipulating appropriate provisions and punishments for each contingency beforehand, such measures attempt to produce clearer expectations and fewer surprises, and thus increase the level of confidence in each other's likely behaviour. Companies typically hope that these safeguards never need to be used, so their purpose is deterrence beforehand and thus preventive, and not revenge or punishment afterwards.

Consequently, management can purposefully cultivate trustful interairline relationships, but trust is difficult to enforce. However, demands for trust enhancement and the degree to which airline partners are tightly bound into an alliance are what management needs to balance. One of the dangers for alliances is a partner being self-sufficient, and little motivated to further develop the partnership. This might occur in partnerships where exit barriers are so high that no partner can afford to leave. Alliances live off steady growth, development and adjustment to the changing environment. Each of these trust-building factors are, to some degree, within management's control, and each factor therefore merits attention during the design and implementation stages of an alliance and while the partnership is in operation.

### 5.6.2 Collaborative Network Management

The principle underlying network management is the assumption that profits are maximised when an airline optimises its total network rather than individual routes (see Farkas et al., 2000, p. 180). The focus on traffic optimisation, operationally as well as financially, has thus shifted from a route-specific view to an integrated systematic approach. Network management orchestrates airline traffic and takes financial and operational responsibility and is thus seen as one of the most crucial, as well as one of the most complicated roles in airline governance (see Barton et al., 1994, p. 33). With airlines forming horizontal links and combining their

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<sup>104</sup> An example of a non-redeployable hostage is KLM and Northwest's distribution structure. KLM has given up its sales and marketing organisation in North America and, in turn, Northwest Airlines has given up its organisation in Europe, Africa and the Middle East.

individual routing structures, alliance network management certainly receives augmented attention as part of collaborative safeguards.

While network management also incorporates tasks such as product design, its core function lies in the arrangement of efficient route configurations and the provision of adequate equipment and staff. This purpose is based on the notion of individual routes being part of a wider web of O&D markets, which should be optimally inter-linked to offer maximum connectivity and passenger convenience. Network management plays an equally important role in airline partnerships, in particular considering the endeavour to increase online instead of interline connections. The scope, however, is wider, and usually more complex, as individual schedules of partnering carriers need to be combined and co-ordinated (see Weber, 1997, p. 54).

The number and quality of O&D pairs in an airline partnership can be increased by a systematic configuration of combining direct point-to-point traffic with connecting traffic. Optimised co-ordinated schedules also impact on flight density and profitability, and potentially result in a diversification of the client base. However, on the whole, airline partnerships can only capture the aforementioned potential of network management if they can act on the following four levers (see Farkas et al., 1997, pp. 180-182):

1. Destinations, schedules and flight connectivity: Destinations and schedule decisions play a key role in partnership network management, as they are the fundamental input factor and provide the desired market access. Connectivity determines how airline partners' flights interact with each other in order to produce most convenient O&D connections<sup>105</sup> (see also Netzer, 1999, p. 175).
2. Matching resources<sup>a</sup> and demand: Aircraft and crew assignments should always be flexible and detailed processes. The optimisation of equipment allocation depending upon fluctuations in passenger demand can be achieved by short schedule planning periods. This will decrease fleet and crew costs and has a positive effect on load factors.
3. Airport transfer facilities: An airport's physical configuration may impact on the possibility to transfer passengers. Network management must consider infrastructure issues and influence the physical disposition of partner airline's airport presence.

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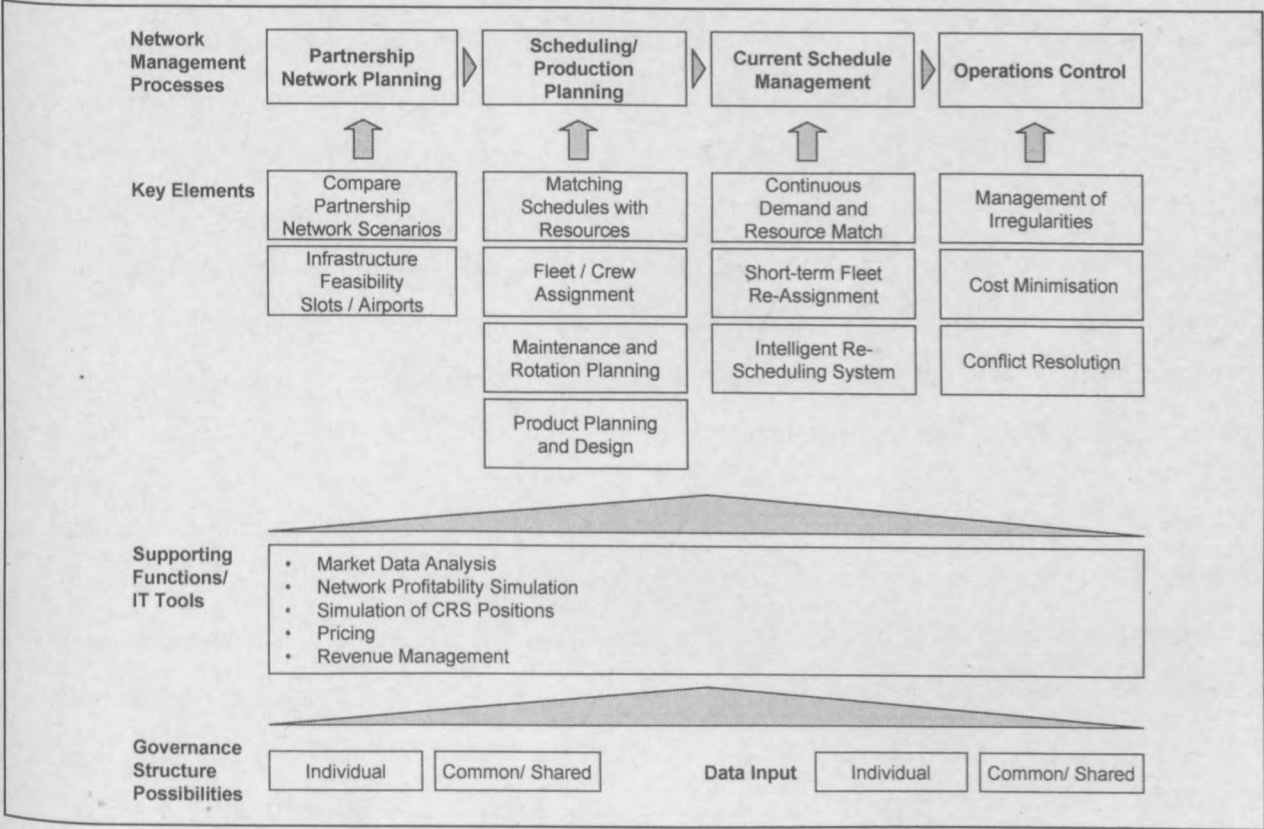
<sup>105</sup> For a detailed description of connectivity, see chapter 3.3.2.



4. Governance structure and data input: The establishment of a joint network management organisation to overcome data input and processing constraints and increase performance is crucial to a successful operation. Only if all partners commit to data feeding and processing, thus sharing their individual actual and future schedule information, can network management lead to the desired results.

Various elements and the usage of different supporting functions can achieve these levers. The following figure illustrates processes, elements, functions and tools as well as governance and data input structures of a typical joint partnership network management.

Figure 5.4: Partnership Network Management



Source: own compilation

The first level describes processes of network management and their respective individual elements. Many of these elements are still subjected to isolated treatment, and are thus not delivering overall optimised results. Aiming at the most flexible and dynamic solutions, information on revenue management, pricing and fleet assignment are to be pooled, hence both demand and supply can be controlled across a network. In addition to this internal information, external data, such as marketing information and market intelligence on

competitors' action<sup>106</sup> as well as data concerning the macro environment, are crucial (see Martin et al., 1997, p. 61). This decision-making process is based on a number of supporting functions and tools, which produce the necessary information in order for the elements of network management to develop the most effective output.

Increasingly, the supporting functions are electronically organised, given the amount and complexity of information and the deduction and interpretation of results. Predictive and statistical tools, as well as other internal and external data generation systematically and analytically process information, and help to achieve the best possible solution regarding joint schedules, as well as connectivity for partnership O&D markets.

Data input is an ambitious task for joint network management. Challenges mount with the number of partners and the intensity of the collaboration. To organise governance collaboratively or individually, common data input and process structures are key demands made of productive network management. As discussed before, airline partners tend to be loath to disclose information that might affect their competitive position. Overall partnership governance structures and, in particular, network management must consequently provide incentives, such as valuable network management payoffs in a trusting environment, in order for allies to provide the data to a satisfactory extent.

It is claimed that independent and centralised network management organisations can render partnership network management tasks most effectively (see Martin et al., 1997, p. 61). Airline partnerships do not yet exploit the revenue potential of joint network management and limit their route co-ordination to single approaches. A paradigm shift is consequently required of airline partnerships. Carriers, being in a collaborative relationship, have to abandon their individual authority – at least partially – in favour of overall network-optimising systems. Solutions might turn out to be disadvantageous for the individual player, but improve the results of the whole. Therefore trust between partners must be built and mechanisms to share profit on a fair basis be established. Rapid changes in the marketplace and the need for swift reaction strengthens the demand for common network management structures. A centralised network management could be the solution to the turbulent economic environment, as it would provide a bias-free, overall network optimisation, which can potentially avoid conflict

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<sup>106</sup> This external data could be collected by MIDT (Marketing Information Data Tapes) which are compiled by CRS providers and give detailed information on flights and passengers, such as origin and destination, flight number, date, booking class, and number of total passengers.



among airline partners. Another benefit from a centralised network management unit could be its IT solutions, know-how transfer and immediate cost saving possibilities, particularly for smaller carriers.

However, centralising network management requires careful consideration of the trade-offs between complexity and co-ordination costs. If the majority of partnership traffic takes place in the individual sub-networks, the incorporation of a centralised network management unit might turn out to be contra-productive (see Steininger, 1999, pp. 270-273). This is particularly the case in complementary, behind-gateway codeshare operations. The other main opposition to centralised network management solutions lies in the obstinate reluctance of airlines to share data and give up control of this key function. It remains a trusting partnership management's task to persuade allies to take advantage of the operational and financial benefits of joint network management structures.

### **5.6.3 Joint Product and Service Management**

Partnership-wide product and service management helps to offer an alliance-specific service chain to alliance passengers. As, to a large degree, each airline usually bases its differentiation strategy on individualised service aspects, it is crucial to merge or harmonise the partnership's services in order for the passenger to experience the promised alliance product features.

#### **5.6.3.1 Flight Connections and Passenger Service**

As discussed, airline passengers prefer online to interline connections, which essentially motivates carriers to co-operate. For infrastructure, technical, economic and regulative reasons it is unavoidable for passengers to connect itinerary flights within a partnership. Emulating real online connections with quasi partnership online offerings is thus a necessity to live up to the alliance's service promises.

In accommodating the service promises of seamless travel, global partnership passengers should be given the convenience of only one check-in for their entire online trip. Seamlessness accordingly includes baggage through-checks, seat reservations for all connections and boarding passes issued once at the beginning of the journey. While technical (IT and conveyance) and organisational prerequisites usually prevail, airport infrastructure and layout must support these passenger demands as well. Ideally, the arrival and departure gates of connecting flights should be situated close to each other in order to allow short

passenger transfer distances, decrease the risk of lost baggage and enable quicker transfer times.<sup>107</sup> Waiting areas and lounges as well as flight information facilities should be present. General agreements have to be established between the carriers regarding handling and safekeeping of delayed passengers. Delays should be dealt with in partnerships by organising and offering passengers alternative connections. This, however, requires appropriate communication and exchange of information among the airline partners, preferably before the actual event of a delayed flight (see Beyhöff et al., 1995, pp. 39-40).

The communication process with the passenger in offering seamless travel is another important issue. Passengers must never be exposed to communicational interface problems between airline partners. The external communication of a carrier partnership network with its passengers must be clear and unanimous. This demand becomes crucial in the event of problems such as delays, lost baggage or other issues of pre- and inflight convenience or loyalty programmes. Airlines in partnerships tend to pass problems and their solutions on to the carrier that feeds passengers into the alliance network, or to the operating carrier in general. However, each individual partner must give the greatest care to every passenger complaint within a network. This calls for cultural adjustments amongst staff, who usually only feel responsible for his or her carrier's service. In addition, the availability of appropriate IT and communicational tools must be ensured, in order to address these problems.

#### **5.6.3.2 Core Product Harmonisation**

A persistent obstacle in codeshare partnerships and, to a limited extent, in franchise agreements and other branding collaborations, is passenger disappointment with product and service-related features of the operating carrier. Issues of passenger deception relating to the air transport core product were described above. In terms of technical and output quality, the value of every interaction with the passenger determines the passengers' level of satisfaction and must be consistent within the partnership (see Grönroos, 1995, p. 253). This necessitates strong product harmonisation attempts of the core inflight product and certain pre- and post flight product features.

Product harmonisation, however, is not a trivial task given the history of individual carriers' diversified product development and the tradition associated with particular features. Reluctance to relinquish or alter these product peculiarities is certainly comprehensible and

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<sup>107</sup> Quicker transfer times also have an effect on a connecting flight's CRS position, as swift transfer receives listings higher up on the screen.



has to be expected. The depth of integration, which reflects the purpose of allying, and the agreed or perceived life-span of the co-operation are determinative factors of product harmonisation.

In operative and certain hybrid forms of partnerships, it appears sensible to introduce cost-effective standardised product elements to propound minimal product homogeneity. Elements to be harmonised during the inflight phase can lie in food and beverage concepts, as these features are comparatively easy to synthesise and, on the other hand, play an important role in the customer's product perception. Besides harmonisation with regard to the common catering quality, airline partnerships can use recognition-oriented amenities. Part of the operating carrier's catering concept could typically be to offer the marketing carrier's special catering items. Serving SAA's wines on a Lufthansa-operated LH/SAA codeshare, surely honours original SAA passengers and demonstrates the association of the two carriers.

Rotation or partial assignment of partners' flight attendants could be another inexpensive means of decreasing possible quality gaps and creating a hospitable climate (see Cameron, *People Movers*, 1997). The presence of service personnel from a passenger's home, or preferred carrier or from the marketing carrier, impersonating the partnering carrier's cultural values and linguistic background, creates trust and boosts alliance commitment. This remembrance-based harmonisation can be supplemented by a more partnership-focused harmonisation. Characteristic product elements could possibly be introduced. Souvenirs or special food or beverage offers, which are individually designed and typical of the alliance network, possess a high degree of further recognition (see Steininger, 1999, p. 278).

Partnerships intended and designed to be more strategic in orientation should not only adjust product features to one another, but also mutually develop new products. Some of the above-mentioned product reconciliation characteristics thus also apply to strategic partnerships - to a more intense degree, however.

Joint product development tends to be cost-effective and joint procurement holds potential for scale effects. However, local and regional market differences based on ethnic and religious specifications, have to be taken into consideration. This especially applies to food and beverage items and entertainment contents. Cabin configuration should also be reconciled on a long-term basis. Particularly, premium class passengers wish to experience network-wide consistency in seating configuration such as leg space, seat pitch or sleeper seats, and in entertainment infrastructure (see Shifrin, *Atlantic Luxury*, 2001). Yet, common standards with

regard to the aforementioned cabin configuration elements should naturally also apply to economy class. The longer the flights and the more costly the journey, the more important seating configuration is. Consequently, codeshare operations or partnering airlines operating overlapping networks can be affected by the passenger's preference based on inflight service quality differences. In close partnerships, airlines must thus try to harmonise product features as consequently as possible, to avoid passenger discontent and minimise the risk of biased buying behaviour. An example of high product homogeneity is KLM and Northwest Airline's joint business class called "World Business Class", where seating configuration, and inflight services are completely identical.

Passenger service on the ground is equally important to influence the traveller's perception of an airline and its partners. Cost considerations play a role in merging ground services to avoid idling of ground staff and allow for a more efficient use of equipment and infrastructure. Quality differences in ground operations can be eliminated, or curbed by airlines merging or closely co-operating in servicing and handling their passengers. In addition, a common ground service product, including all respective ground-based elements of the value chain, can sharpen the alliance's identity and promote its advantages.

One of a range of product harmonisation features, for example, is joint lounge access. Lounges for premium passengers are costly to set up and to maintain and thus represent cost savings potential in airline partnerships. On the other hand, lounges play an increasingly important role in product strategies of carriers, targeting the business sector. Usage of a carrier's lounge facilities by a partnering airline, however, equals outsourcing of a ground service element and thus loss of quality control. Often airlines are very reluctant to surrender control of a prestigious ground service element and to be at some other's mercy. Conversely, joint lounge usage can again furnish the alliance with more compelling, unique product features.<sup>108</sup>

To completely harmonise inflight product features is an almost impossible task as long as airlines wish to keep their distinct identities. While multilateral partnerships - whether formed as umbrella brand concepts or less intensive collaborations - build their corporate identity based on the individual identities of their member carriers, complete product harmonisation is neither wanted nor feasible. The reasons are twofold. Firstly, individual airlines rightfully see

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<sup>108</sup> In Bangkok, Star Alliance members once had a total of 13 lounges, which have now been reduced to 7. ■



their distinct identity as a key competitive element and core asset given the amount of resources invested to establish the brand (see Nelms, 1996, p. 34). Joint branding and product strategies are therefore regarded with much scepticism. From the passengers' perspective, total harmonisation is as little desirable. Variations in product design and characteristics are perceived to be a welcomed peculiarity, often linked to a cultural distinctiveness of the operating carrier. Air travel in a foreign continent or region is often associated with special inflight product characteristics such as Singapore Airlines cabin attendants' traditional dresses. Some other airlines have built their products around other myths and backgrounds, like Virgin Atlantic's relaxed, unconventional and innovative inflight service. However, it remains a necessity for quality standards to be similar and technical product features to be comparable among partnering carriers.

### **5.6.4 Collaborative Branding and Marketing**

Airline partnerships are becoming more and more prominent. In the public eye, the dominance of global multilateral grouping is increasing, not only due to their widening scope, but also because of dedicated common branding strategies under which individual carriers jointly operate. In discussing airline partnership safeguards, the question of reasons and the most suitable set-up of alliance-wide branding and marketing surfaces. The following sections emphasise these issues.

#### **5.6.4.1 Umbrella and Superbrand Concepts**

Individual brands are important marketing tools and generally long-term investments. As brands represent valuable monetary assets, they are consequently a critical economic factor (see Rao and Ruekert, 1994, p. 87). Meanwhile, traditional airlines are seemingly melding into one another in greater alliance spheres, blurring categories and creating whole new sets of competitors. In this maelstrom, it is not surprising that carriers find it difficult to differentiate themselves, not only to customers but also to investors and prospective employees. A winning brand strategy - one that is integrated into a company's overall business strategy - can make a tremendous difference in overcoming these challenges. A powerful brand can cut through the clutter of the marketplace, heightening awareness of the air transport product or service and shifting demand in its favour.

The air transport product, which is primarily a commodity, is differentiated by its producers through quality and design features. However, the success of an airline does not only depend on worthy service, but on its image projection and reliability. Brand names carry meanings

that consumers come to value, and brand names have utility, because as sources of information they identify the manufacturer (see Rao et al., 1999, p. 259). This makes the brand a hostage, as it conveys to the consumer the identity of who to punish should the product not perform as expected (see Rao and Ruekert, 1994, p. 89). Perceptions of quality and reliability are projected by the image of a carrier, which in turn is directly associated with its brand name. This perception influences a passenger's ticket-buying process by providing information about the product's expected quality and thus decreases uncertainties.

Airline brands and images not only project values of quality through passengers' own experiences, but also through marketing communication campaigns, highlighting the sophistication and uniqueness of the product. As airlines sell a range of product variations (destinations, fares, service types, loyalty schemes) under the same brand name, brands become valuable, and create significant economies of scale and scope in the production and use of product and brand information (see Steininger, 1999, pp. 204-208).

What applies to individual airlines is equally applicable to airline partnerships, which consequently seek to balance the interests of individual brand identities and the advantages of overall partnership brands (see Nelms, 1996, p. 34). Airline groupings have thus equipped their multilateral partnerships with distinct brands and promote these alliance trade names to a more or less intensive extent. The drivers for air carriers to engage in alliance branding are diverse and can range from ease of market access, customer satisfaction, cost-effectiveness and revenue motivation, to exclusivity and partnership exit barrier considerations.

A core motivation in establishing alliance brands is to constitute member brands under the umbrella brand's name in foreign markets. This, for example, would be the case in United Airlines trying to gain access to the French market and competing with the local incumbent, Air France. United would rather jointly sell the much stronger Star Alliance brand than the individual United Airlines label (see Beirne, 1999, p. 23). Entering the home market of a partnering carrier under the alliance's umbrella brand can yield additional benefits. The association of the entering airline as an ally of the home carrier under one umbrella brand can have positive effects on the pace and success of market entry. This typically applies in the case of American Airlines establishing brand awareness in the Hong Kong market by using the brand suction of Cathay Pacific, an ally in the Oneworld group of carriers.

A key concern of umbrella branding is how to signal quality in a situation where several partners commonly support one alliance brand (see Rao and Ruekert, 1994, p. 89). Umbrella



branding does not require airlines to abandon their individual corporate identities, but to establish brands parallel under a newly built identity, thus creating brand allies. The set-up of a global alliance network requires associations with a range of individual and, occasionally lesser-known airlines, while different underlying organisational set-ups are conceivable. The allies' brand qualities in this composition are, however, not necessarily equal and credible communication of the alliance brand can be troublesome (see Rao et al., 1999, p. 259). Consequently, the choice of carriers operating under the common umbrella brand must follow basic principles of partnership selection, but - more importantly - should recognise individual brand and quality considerations. Omission of those requirements can jeopardise the entire umbrella brand operation as customer sanctions can be expected, thus leading to the forfeiting of a built reputation. Communication must consequently not only propagate the composition of the multilateral partnership, but key features that generate the image and signal quality of the umbrella brand (see Beirne, 1999, p. 23). Those image features can be its global reach, commitment to safety and security, a common understanding of quality and FFP. Carriers amalgamated under one umbrella brand therefore provide the passenger with information on what is to be expected during the journey, especially while the quality of the umbrella brand product is difficult to observe (see Rao et al., 1999, p. 260). Herein lies a key area of possible passenger advantage and a touchstone of brand quality. Only once the passenger associates benefits with the umbrella brand, can the brand image be used successfully, since it receives true customer value.

Other than being united under a common umbrella brand, partnering carriers also establish discrete, jointly-branded products. It was mentioned earlier, that KLM and Northwest Airlines have developed a joint business class product. Another example is joint FFP under one name, e.g. Qualiflyer Group's FFP, called by the umbrella brand's name, Qualiflyer. Since common products are usually perceived to be identical, this strategy is more efficient than umbrella branding from a communicational point of view, as it furnishes the passenger with surety regarding consistent quality and reliability of the product. From a conceptual standpoint, this approach is associated with less risk, as integration is limited to defined areas of joint operations.

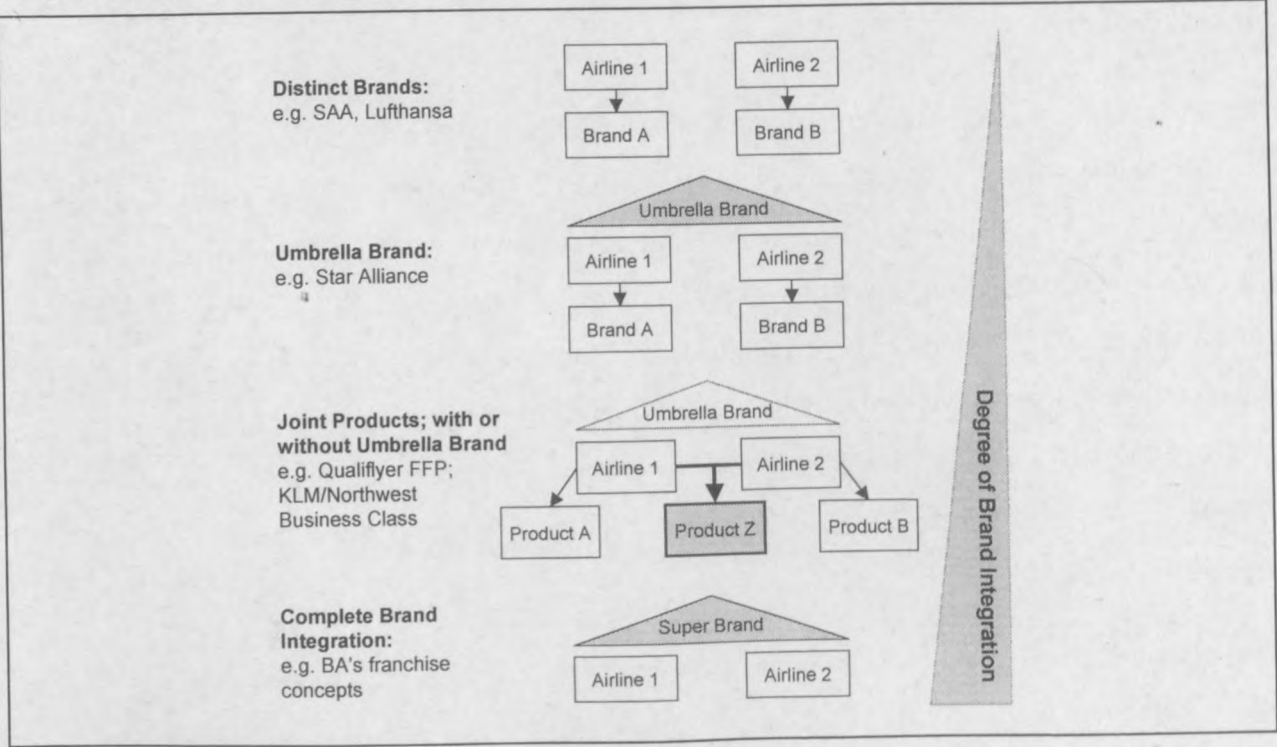
A widely propagated scenario is to completely abandon individual brands and either use a partner's brand - which happens in the case of franchising - or join brands under one network-wide superbrand. The franchising brand strategy works widely for smaller carriers. The logic of abandoning an individual brand in order to benefit from the franchiser's superior brand is

the key motivator for franchisees. However, a superbrand concept, which is converted into a single brand under which all participating carriers operate, is a difficult goal to achieve. These impediments are multifarious, but primarily lie in the individual carriers' reluctance to abandon their brands, based on brand value considerations. Additionally, an anticipated passenger opposition towards brand mergers result in hesitant common branding approaches.

As a matter of fact, none of the international airline groupings have so far reached the stage of assigning priority to the superbrand to the detriment of individual brands. Consequently, brand integration will only occur if the regulatory environment allows for mergers and take-overs to happen. However, even if this scenario ever actualises, it is doubtful that merged or acquired carriers will relinquish brands. If the individual brand value holds more potential than a new brand or the strategic partner's brand, it would make no sense to give it up. For now, umbrella brand concepts are a platform of common standards and operational procedures as well as name tags for membership in multilateral groups of carriers. Further consolidation may lay the foundation for the organisational functioning of superbrand concepts. Whether they will perform remains to be proven.

The following figure summarises the above-mentioned possibilities of brand integration.

Figure 5.5: Tiers and Degrees of Brand Integration





Airline management should take extreme care in forming highly integrative brand alliances of the above-mentioned kind. Circumspection of brand alliance concepts is well reasoned and driven by the recognition that an umbrella brand or superbrand can be associated with another brand of poor quality. Conversely, a prospective member of a multilateral partnership needs to first establish that the quality of the umbrella or superbrand is valuable, and likely to remain so, and then, given its likely costs, assess the potential profits from the association. In highly competitive markets such as air transport, damaged brands can have significant monetary consequences. Airline partnership management should take cognisance of the vulnerability of their own brand to future economic situations and sanctions from irate consumers, should their individual, umbrella or superbrand be associated with lower quality.

In general, however, given the multitude of individual motivations for sharing or commonly developing a brand, it is difficult to advise on whether or not airlines should engage in alliance branding. From a customer satisfaction perspective, brand alliances are an appropriate strategy when the quality of the product is unobservable before the purchase and the producer, i.e. the individual airline, wants to signal quality by means of associating itself with other high quality allies.

#### **5.6.4.2 Market Communication**

Joint market communication within airline collaboration is an important instrument to create awareness among passengers, the travel trade and other stakeholders in the joint services.

Until recently, partnering carriers neglected to sufficiently convey information about the instruments of their partnership action to trade intermediates and passengers (see Beirne, 1999, p. 23). The confusion that still surrounds codeshare agreements, specifically with regard to CRS display and the concomitant passenger deception, is due to little or ineffective market communication. Published schedules and information on frequencies propagate the individual market effects of partnership action, but tend to ignore basic consumer information on the collaborative instruments. Facts on the composition of the partnership, the basic terms and, most importantly, the benefits that passengers can gain, need to be conveyed to the market (see Nelms, *Getting Their Act Together*, 1999, p. 27). While airlines have long been discrete organisational entities, they must now establish a communicational policy that entails customer and trade education regarding their collaborative activities.

Communication efficiency and cost-effectiveness too still require greater exploitation. Joint promotion, also of less intensive partnerships, is still the exception rather than the norm.

When in January 2001 SAA and Qantas agreed on a blocked space codeshare agreement for the routes Johannesburg-Perth and Johannesburg-Sydney, each carrier individually advertised the new schedule. In this particular case, separate market communication was certainly due to the low-involvement, operative blocked space agreement. However, a joint promotion of the routes could have been more cost-effective and efficient in reaching and educating a wider market base, thus pre-empting conceivable passenger irritation.

It seems advisable for participants in multilateral alliance networks to promote the broader partnership umbrella brand in their respective home markets. Lufthansa, for example, always adds the Star Alliance logo to all its communicational campaigns in the German market. This equips other Star Alliance carriers with an indirect market exposure through umbrella brand recognition that they would otherwise not receive. Especially for the purpose of brand development, envisaged communication campaigns have to evaluate whether they can also be beneficial in prioritising the umbrella brand by discounting individual carriers. In many cases, shares of airlines in foreign markets do not justify intensive individual marketing campaigns. Pooling marketing efforts, however, spreads the costs over a wider base and promotes the entire network. In addition, scale effects arise when purchasing marketing and communication services. Star Alliance has therefore committed itself to joint marketing in all offline regions (see Nelms, *Getting Their Act Together*, 1999, p. 36).

However, not even all of the current multilateral groupings have yet reached this stage of collaboratively marketing of their joint range of products. On the one hand, this reluctance lies in the participating carriers' lack of commitment to engage in collective strategies. This unwillingness originates from carriers not wishing to give up their as yet small market share and brand status in favour of an umbrella brand concept.<sup>109</sup> On the other hand, umbrella brand products are often not sufficiently harmonised in order to allow for joint communication. Consequently, market communication can only yield benefits for all partners once the common wellbeing has precedence over individual success. The most important objection to establishing reciprocal marketing efforts comes from the regulatory regime that, in many countries and for many forms and instruments of airline partnerships, does not allow joint or co-ordinated marketing campaigns. If allied carriers cannot jointly market their product, the benefits of mutual market communication are at least partly diluted.

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<sup>109</sup> Joint communication would thus be equally beneficial in markets, where all members of the multilateral partnership have an equivalently low market share or operate offline. Market share constellations of this kind are, however, unlikely, given the different size and geographic focus of multilateral partnership members. ■



## 5.6.5 Distribution Management in Airline Interrelationships

With one of the key motivators of airline partnerships being revenue generation, it is questionable whether the above-described configurational aspects of airline collaboration are beneficial per se, or if they merely represent supporting constructs for exploiting synergies in distribution. The following paragraphs touch on some core aspects of distribution management and develop prerequisites for successful interairline collaboration in the marketing arena.

### 5.6.5.1 Pricing

Pricing plays a central role in airlines' distribution and differentiation strategies, given the competitive environment and patterns of passengers' price elasticity (for determinants of airline pricing, see Doganis, 1986, pp. 206-208 and Shaw, 1990, pp. 26-28). As schedules are usually unalterable on a short-term basis and only within timetable periods, pricing and yield management are critical instruments in filling aircraft seats. Pricing regulations and regulative action have been widely abolished for individual carriers - with the exception of cases of predatory pricing or unfair high or low pricing - in the main integration regions after the removal of substantial regulatory constraints (see 2.5 for deregulation in pricing). This greater sovereignty in setting airfares further highlights its competitive importance and organisational challenges.

While airline partnerships should ideally concentrate on the wellbeing of the collaboration, pricing has become an issue of co-operation management and organisation (for pricing as part of partnership agreements, see The European Commission, Commission Notice Concerning the Alliance..., 96/C 289/04 - 96/C 289/06, pp. 4-13). The closer airlines collaborate, the more harmonised fare structures need to be in order to avoid customer confusion and biased buying behaviour. Passengers discovering that umbrella-branded codeshare partners follow different pricing strategies for the very same product, rightfully feel irritated. Comprehensive joint pricing strategies need to redress passenger irritation. Joint strategies furthermore have the advantage of decreasing discrete co-ordination efforts for pricing opportunities, offering competitive fares for jointly served O&D markets, which, accordingly, enhances the total result.

In solving the problem of fare opacity and to enhance synergy, partnership airlines need to seek alliance fares that are transparent, interlineable and represent sufficient incentives for the allied carriers to commit to the partnership. Interline fares would be set by carriers to

maximise joint profits from various markets where they provide interline, quasi-online, services. However, the setting of interline fares can take on different methods, as the basis of fare determination can vary.

A very elementary pricing method underlies IATA fares. IATA fares, which are set in periodic multilateral tariff conferences for O&D markets, allow for interlineable connections, but are minimally competitive and come with the restriction to share profits according to distance-based prorating formulas<sup>110</sup> (see Pompl, 1998, pp. 202-211 and Brueckner, *The Benefits of Codesharing and Antitrust Immunity*, 2000, pp. 6-7). Carrier fares or sub-fares are set by each partnering carrier according to individual revenue demands on routings operated by joint services. Carrier fares are usually lower than IATA fares, but only apply to the issuing carrier and are not endorseeable. However, sub-fares per se do not provide partnering carriers with a competitive advantage as long as they are not co-ordinated. Interline traffic, whereby two carriers individually optimise their subfares, might have a disadvantageous effect on the total O&D service. In solving this problem, carriers must co-operate in setting the overall O&D fare and consequently enhance revenue and profit generation (see Brueckner, *The Economics of International Codesharing*, 2000, p. 3).

To circumvent disadvantageous profit spread, special prorate agreements (SPA) have to be negotiated between partnering carriers, allowing for a fair profit share. Such agreements provide leeway to offer competitive throughfares within the entire network. Nevertheless, it is important that a universally applicable SPA be negotiated to avoid time and cost-consuming fare bargaining for separate O&D markets (see Steininger, 1999, p. 310).

Regulatory authorities are well aware of joint pricing efforts and the effect that monopolies or oligopolistic competition structures can have on fare development. This is why joint pricing is prohibited in most markets. An exception is airlines operating under immunity or exemptions from competitive laws or antitrust regulation<sup>111</sup> (see above and Stragier, 1999, p. 2). Equipped with immunity, carriers can thus collaborate in a fashion that is impossible under traditional pricing arrangements.

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<sup>110</sup> IATA fares lost significance with deregulation, but still occur in interline transport (see Pompl, 1998, p. 208).

<sup>111</sup> Terms of competitive exemptions differ according to the geographic regions concerned. In Europe, airlines can co-ordinate certain functions once they have been exempted from competitive rules. Antitrust immunity roughly determines the same in the US markets.



Depending on the intensity of the co-operation, different collaborative pricing measures are conceivable. However, to exploit pricing benefits to the utmost degree, the following discrete steps can lead to worthy results (see Steininger, 1999, pp. 313-314). In a first phase, airlines should agree to alliance network fares on the basis of SPAs. Under the assumption of legal feasibility, these alliance fares should quantitatively allow for optimised results from interline services.

The next phase should include agreements on joint pricing policies, paired with the exchange of information and mutual consultations regarding pricing topics. The above-mentioned example of subfares only presents benefits once airline partners exchange data on the effects of individual fare variations. The following exemplifies this context under sterile market conditions:

Two carriers jointly operate in the O&D market A-C, with carrier 1 serving A-B and carrier 2 serving B-C. They have agreed on subfares, are therefore able to offer a competitive O&D fare. However, carrier 1 decides to increase its fare level with an overall increasing effect on the A-C fare and consequently lowering demand. Since airline 1 is earning more on each passenger, it might come out ahead, even if traffic is lower. The consequence for carrier 2 will be adverse. Charging the same subfare, but selling it to fewer customers, carrier 2 will unambiguously be negatively influenced by carrier 1's action (see Brueckner, *The Benefits of Codesharing and Antitrust Immunity*, 2000, pp. 6-7). To avoid this set-up, partnering carriers should formalise their information policy concerning pricing decisions and establish a set of rules regarding fare level variations.

Regional assignment of pricing authority among allies would be a further phase in harmonising fare determination. Pricing authority does not imply that a carrier can set fares autonomously in a partnership, but by analysing market trends and by advocating fare recommendations to its partners. This authority could be assigned to a carrier that has the higher market capacity and has the most refined market knowledge.

Joint pricing would be the ultimate form of pricing co-operation, provided there is immunity from antitrust laws. Partnership pricing can be organisationally achieved by an independent entity merely dealing with pricing issues. The organisation would be responsible for optimising the income or the contribution margin in the entire alliance network. Nevertheless, the merger of airline pricing tasks in partnerships poses a substantial threat to the individual carrier, as autonomy would be decreased significantly by outsourcing a core business

function. To avoid opportunistic behaviour by partners, structures and incentive mechanisms have to be established in order for carriers to behave optimally collaboratively in pricing-related issues (see Steininger, 1999, p. 314).

#### 5.6.5.2 Yield and Revenue Management

From the perspective of the above-mentioned pricing decisions, airlines are interested in knowing how to best exploit revenue potentials by way of high load factors and capacity management, while maintaining acceptable levels of service.

To maximise revenues, the airline industry uses the practice of selling identical seats for different prices, which is commonly referred to as yield management or seat inventory control. Yield management is an example of a more general practice known as revenue management or perishable inventory control, in which a commodity or service - with no differences in the marginal production costs - is priced differently depending on various restrictions on booking or cancellation, e.g. non-refundability or partial refundability.<sup>112</sup> This price discrimination is fuelled by demand variations in air transport service between elastic and inelastic travellers (for a discussion of discriminatory pricing, see also Hanlon, 1996, pp. 157-170).

The common thread in pricing discrimination and demand-based service restrictions is ultimately the perishability of the commodity: a seat on a particular flight is worthless after the flight departs (see Subramanian et al., 1999, p. 147). The airlines' short-run problem thus, is not a decision about production levels, but one of allocating a fixed number of output units among customers paying different prices and having different demands. The yield management function within an airline seeks to optimise income, given the fixed capacity flying between city pairs, and the various price levels and restrictions facing them by forecasting passenger demand and controlling the sale of the available seats - also by way of overbooking flights. In doing so, the yield management department seeks to reduce revenue dilution and prevent unnecessary decreases in revenue and yield (see Botimer, 2000, p. 105).

An airline's profit-maximising price discrimination is usually solved by complex mathematical/statistical programs (for a review of such techniques, see Weatherford and

<sup>112</sup> Further booking restrictions can be: advance purchase requirements, required Saturday night stop overs, blackout periods (discount travel not available on certain days), peak vs. off-peak travel requirements, weekday vs. weekend travel requirements, flight validity restrictions (good for travel between ...), ticketing purchase restrictions (purchase tickets by ...), required round trip travel, flight routing restrictions, and FFP mileage accumulation restrictions (see Botimer, 2000, p. 102).



Bodily, 1992). A few standard steps can describe a simplified version of optimal capacity allocation through price discrimination. Firstly, the airline must segment the market into groups of passengers with distinct demands. These segmentation clusters can describe, e.g., travel purposes, individual values, life-styles, and demands vis-à-vis the travel service, like booking lead times and restrictions. Secondly, the airline creates restrictions that separate the categories of service offered to the customer groups. For example, requiring a sleeper seat and high re-booking flexibility will in many cases separate business travellers from leisure travellers. In a third step, the carrier establishes a fare price for each category based on anticipated demand and financial considerations. Finally, the airline allocates its fixed aircraft inventory among the categories. For example, for 130 coach seats on a particular routing, the airline might create 3 fare categories: deep discount, discount, and full fare, requiring, respectively, 14-day advance purchase and a Saturday stay, 7-day advance reservation and a Saturday stay, and no restrictions. The airline allocates some portion of the 130 coach seats to each of these categories, which is generally referred to as nesting. Over a period of months, as the flight time approaches, the airline may reallocate seats to categories depending on sales. In principle, the prices may remain constant over time, while the availability of fare categories changes as seats in categories with lower fares become filled and the category becomes unavailable. This typically implies that the discount and deep discount seats primarily go to leisure fliers, and that business travellers, who cannot meet the restrictions, pay full coach fare. A yield management system thus constantly varies seat capacities allocated to booking classes and according to expected sales figures (see Reece and Russel, 2000, p. 1003 and for an intensive discussion of a yield management example, see de Harris and Peacock, 1995, pp. 36-38).

To collaboratively reap the benefits of optimised revenues, airline partnerships have to commit to joint yield management. The example illustrated above visualises the challenges of yield management in the case of joint operation and joint marketing of a flight. Airlines with individually segmented customer bases, somehow have to reach agreements on how best to satisfy their passengers' demands by variably pricing their joint product. In codeshare agreements, a common understanding needs to be established on who gets access to capacities of a codeshare flight, how individual overbookings will be handled and how passengers will be paid damages in the case of overbookings. Finally, the participating carriers have to come to a solution about who carries the distribution risk of joint efforts (see Steininger, 1999, p. 315).

The better the exchange of information functions are in line with the above-mentioned systematic demands of yield management, the more accurately booking behaviour can be predicted and the better revenue can be maximised by booking class assignments. Exact booking prognosis also allows for more precise decisions regarding overbooking rules, thus decreasing the possibility of passengers being denied boarding despite confirmed bookings.

There are different ways of handling a codeshare flight regarding its yield management. Most commonly, the operating carrier maximises revenue through its own yield management system, which, however, excludes the overall partnership demands. The following describes different ways of yield management in airline partnerships with a collaborative focus:

In blocked space agreements - in particular hard blocks - the operating carrier manages yield for its own fraction of the seat capacity, while the marketing carrier uses its own yield management system to market the prepaid seat contingency (see Steininger, 1999, pp. 315-316 and Beyhoff et al., 1996, p. 11). The downside of this procedure lies in the separate optimisation of capacity blocks. If demand develops unevenly for the marketing carrier and capacities cannot be swiftly adjusted, discrete optimisation can lead to suboptimal results. Depending on the overall intensity and width of the collaboration, the carriers should consider implementing yield management systems that can quickly reallocate capacity in the case of mismatched demand structures and redress the threat of unrealised revenue potential.

To avoid friction of fixed seat allocation, real time codesharing is used in airline partnerships. This form of revenue optimisation does not require a joint yield management system, but joint access to a CRS. One of the codeshare partners will handle the flight on its proprietary IT system. The other partner will be given access to the system information through a CRS and can then make the relevant bookings. This allows the entire capacity to be optimised in one system, while collaborating partners have mutual access to the capacity.

The biggest challenge is responsibility allocation regarding managing yield. While the operating carrier incorporates the highest economic risk from the codesharing, and should therefore be responsible for optimising the trunk traffic, its yield management does not optimise connecting complementary traffic. This could be achieved by assigning yield management responsibility to the partnering carrier operating the connecting flight. In general, the carrier that can potentially aggregate the highest revenue, for example, through multi-connect routings, should generally be responsible for optimising revenue.



The set-up of joint access to proprietary yield management information requires a number of information technological adjustments. IT systems and CRSs have to be interfaced and they must be capable of communicating with each other. Allies' booking classes and respective fares need to be harmonised. In some instances, a carrier's booking classes have to be translated into the other airline's booking class structure. British Airways and all of the Oneworld alliance partner carriers, for example, commonly changed and standardised their booking classes in 2000.

However, especially while practising beyond-gateway codesharing, individual yield management systems might not sufficiently optimise results, as the focus is on single carrier point-to-point traffic and not multilaterally operated O&D traffic. This necessitates yield management systems to be implemented for O&D markets or the entire network. In some instances, carriers will have to accept partial income reductions to maximise overall partnership performance, which requires a good deal of trust in each other and the capability to quantify the benefits of such joint activities. On the IT side, huge efforts would have to be undertaken to create and implement joint systems among partners (see Steininger, 1999, pp. 319-321). However, with the depth of the partnership and the size of the collaborative efforts, investments in joint yield management would be set off by the benefits in optimising revenues.

### **5.6.5.3 Relationships with the Travel Trade and Corporate Clientele**

Airlines' relationship with the travel industry and corporate clients was generally described above (see 3.2.6.2 and 3.4.3.2). The following discussion specifically focuses on collaborative distribution. Airline partnerships can thereby potentially jointly build powerful international distribution systems with large client bases, market knowledge and awareness through their collaborative presence in several markets (see Howarth and Kirsebom, 2000, pp. 39-40).

Travel agency and corporate client loyalty programmes have an influencing effect on the decision process on the products of an individual airline or a group of carriers. Airlines' large capacity market shares make them attractive air transport service providers and generally levers their position in the distribution process. The combination of allies' market shares would consequently result in a promotion of the non-linear reward structure of collaboratively organised commission override and corporate loyalty programmes. Reaching a relevant or critical market share collaboratively can multiply the support to be expected from the travel trade and corporate clients. Members of the Qualiflyer Group of carriers, for example, could

only achieve a significant share of the South African market against incumbent home carrier SAA, while collaboratively targeting distribution intermediaries and corporate clientele.

In approaching the travel trade and corporate clients, cost savings arise from consolidating the sales force, thus avoiding redundancies and saving on transaction costs. Trade intermediaries and bulk clients equally benefit from dealing with fewer sales representatives, who in turn represent a higher aggregated market share. In consolidating the sales organisation, the distribution responsibility should ideally reside with the incumbent home carriers. This applies, for example, to KLM and Northwest Airlines and Qualiflyer's home market principle, where the member carriers market the joint product individually in their respective home markets (see Nelms, 1999, p. 30). In markets where none of the partnering airlines has a dominant position, or is the respective flag carrier, it is advisable to pool the sales forces of the individual airlines. This set-up was exhibited by the Qualiflyer sales organisation in the South African market that collaboratively served both the travel trade and corporate clients.

However, the complete merger of sales forces represents a radical solution and thus finds little realisation. Airlines fear losing control of one of their key assets with potentially suboptimal results in revenue generation and market share development, especially in foreign markets. An even greater risk from outsourcing distribution to a partner develops in the case of a detachment. Accordingly, a partnering carrier can find itself in a situation without a sales force in a foreign market. Austrian Airlines was confronted with this situation after it had left the Qualiflyer Group in favour of Star Alliance. However, the Qualiflyer Group was in an equally difficult situation as it had lost its sales agent in Austria. Merging sales forces, or outsourcing sales to the partnering carrier additionally entails the problem of support asymmetries by sales staff. Sales forces of a competitor-turned-partner might not push the ally's sales sufficiently, but influence customers in favour of their employer. The likelihood of opportunistic behaviour, is thus a key rationale for airlines being averse to sales force partnerships.

To avoid unsound effects when collaboratively developing sales organisations, a single airline should ideally follow a sequence of events. Before committing to a common sales force, airlines need to take intermediate steps to evaluate whether the new sales structure could be beneficial. Airline partners offering complementary networks are less likely to experience opportunistic behaviour in a prospective common sales force than if the partners' individual products are substitutive. If networks overlap, there is a potential threat of competition between the sales interest of the airlines involved. In this case, airlines need to review the



intensity of competition in O&D markets and in particular passenger segments, e.g. price sensitive leisure traveller and flight time sensitive business travellers. Swissair and Turkish Airlines, e.g., served Johannesburg-Frankfurt via their respective hubs in Istanbul and Zurich. While the O&D markets were the same, the joint Qualiflyer sales team could easily segment passenger demand by fare - Turkish being slightly cheaper - and travel purpose - Swissair offering better connectivity for business travel to Frankfurt. In complete network overlap, in particular in direct O&D connections, sales cannibalisation and opportunistic marketing behaviour is, however, still possible. Allies need to segment their markets on the basis of connection details and service features of the discrete offers. The assignment of specific passenger target groups to distinct airline partners in the network has to be communicated to the sales organisation in order to ensure as little inter-partnership rivalry as possible.

A further way to avoid unrealised revenue through opportunistic or antipathetic behaviour within the joint sales force would be to advance incentive schemes for collaborative sales. The incorporation of an independent sales entity, organised as a profit centre, could be one way of doing so. Sales staff would no longer be employed by an individual airline, but by an independent sales company. Through a target and budgeting system, partnering airlines could serve as performance guidance and review systems.

Essentially, to reap cost benefits and profit from organisational effectiveness and efficiencies, airline partners should co-ordinate, if not consolidate, their sales structures. Opposition to these collaborative concepts stems primarily from trust considerations which can be redressed by an adequate partnership fitness evaluation and dedication to mutual alliance commitment.

#### **5.6.5.4 Direct Sales**

Direct sales are cost-effective alternatives to distribution through travel trade channels. Distribution of airlines' products, cutting out sales intermediaries, commonly includes proprietary city centre offices, call centres, and sales offices at airports. Passenger consultation, reservation and ticketing naturally form part of the sales service with immediate customer contact being a key feature of this kind of distribution.

Major airlines usually operate city centre offices in high visibility inner-city locations. These flag shops are usually established to offer one-to-one product consultation, for image building and brand awareness purposes and to highlight the airline's presence, especially in foreign markets. Sales offices at airports play a less important role when consulting with the passenger, but they have an essential distribution function for depositing and collecting

tickets. As for other airport infrastructure, joint operation signifies significant savings potentials. Higher office utilisation, less idleness among staff and office equipment, as well as increased bargaining power in respect of landlords through the pooling of rented space, accounts for cost savings. Generally, the pooling of over-the-counter ticket sales by airline partnerships additionally increases the attractiveness of the offer for the customer. While an English national might be reluctant to approach an Iberia sales facility due to the perception of its limited product-range and its less elaborate and exposed image, this unwillingness might be redressed by a joint Oneworld counter.

Physically, joint facilities constitute one of the key demands of joint direct sales. An English customer, for example, might not be as educated about the output spectrum and performance of the entire Oneworld alliance as about its member British Airways. Customer instruction concerning the composition of the partnership and product range is thus essential. However, this status has not yet been reached, nor is it desired, since the promotion of partnerships and/or umbrella brands is seen as less effective than discretely establishing or enhancing single airline awareness. As indicated before, some carrier networks dismiss efforts to syndicate sales in the home country of a member airline, as this would entail a dilution of the carrier's home market brand status (see Beirne, 1999, p. 23). Consequently, globally and publicly visible joint direct sales only produce the coveted economic results regarding cost and revenue structures if the partnerships, umbrella or superbrand concepts are sufficiently established and accurately communicated.

Telephonic trade through call centres is a relatively cost-effective way of consultation, ticket sales and other travel-related service and products provision to the travelling public. In addition, modern call centres allow for intermodal travel consultation, such as support services for Internet-based and travel trade sales (see Wallace and Hulme, 2001). So far, no multilateral partnership has collaboratively and internationally consolidated its call centre operations. Airlines, however, see the need to concentrate their call centre activities and to establish a global web of facilities. Motivated by capturing call overflow, providing 24-hour service through time zone differences and benefiting from lower cost levels, Lufthansa's subsidiary Global Telesales has so far established centres in Kassel (Germany), Berlin, Cape Town, Dublin, Los Angeles, New York, Toronto and Melbourne. The focus of these call centre activities is primarily on Lufthansa's service and, to a lesser extent, targeted on all Star Alliance members. However, pooling effects can be realised, since individual call centre offices of either joint or existing call centres take over the sales tasks of allied carriers.



Positive size results occur in negotiating hardware procurement, as well as in the provision of communicational services and infrastructure. Especially telecommunication and IT facilities can be centralised, which are then easier to set-up and maintain. Staff recruiting and training can be concentrated and thus be handled more cost-effectively.

Following the example of Lufthansa's call centre structure, internationally dispersed airline partnership call centres could handle regionally differing peak hour calls better and accommodate distribution demands of different carriers from various regions during different times. Joint airlines sales efforts also result in a broader product spectrum, which becomes particularly apparent in foreign markets. A partner being a locally established home carrier would give its allies significant distribution advantages through its existing direct sales structure. The Qualiflyer Group has accordingly decided on the home market principle, which assigns the entire network's regional or national distribution duties to the respective home carrier.

However, negative aspects of opportunistic behaviour and the poaching of passengers within the network is generally associated with collaborative direct sales. The mechanisms leading to unrealised revenue and less efficient collaborative direct sales are similar to those mentioned above in respect of travel trade and corporate client distribution. However, technical solutions, such as system bias, can diminish sales consultants' prejudiced behaviour. A pre-selected limited availability of product options supplied to the consultants in call centres, or direct sales facility reservation systems, can influence sales staff's consulting practice and ultimately steer customer choice. In addition, reservation systems can individually serve clients of a certain airline - upon identification e.g. verbally, by FFP membership or by individual airline number dialled - and prioritise offers and product categories in favour of the client's preferred carrier (see Steininger, 1999, p. 335). To avoid complicated systematic solutions, it is necessary that both the client and the sales personnel are well educated in respect of the joint products. Only if demand mirrors common air transport service offers, and if sales staff can satisfy this demand with unbiased product information, can positive effects be realised using joint direct sales.

#### **5.6.5.5 Internet-based Distribution**

Internet-based distribution is an ever-important tool for airlines. With an increasing number of individuals and households having access to this medium, the widespread availability of secure payment methods, and well-designed and easy to navigate websites, the introduction of

airline online services sites with booking facilities is becoming a regular feature in aviation. Over 80% of carriers distribute their tickets on the web, even if in relative moderate numbers (see O'Toole, IT Trends Survey 2001, 2001 and 3.4.4.2 and 4.4.3.1.2 for types of Internet-based distribution methods and collaborative efforts).

While airlines join forces with competing carriers to develop and maintain travel portals, multilateral umbrella brand partnerships have widely failed to do so. The only multilateral partnership presently operating a true online travel portal is Oneworld ([www.oneworld.com](http://www.oneworld.com)). All other multilateral networks mentioned above refer to the airlines' individual websites for travel arrangements, and only allow FFP reward bookings (Qualiflyer) or automatically direct the customer to a partner's website upon identification of the customer's home country (KLM/Northwest).<sup>113</sup>

The incentives for carriers in establishing Internet-based distribution however are substantial. United Airlines for example achieves the following benefits. Selling a ticket in the travel agency environment is a 16% cost-of-sales proposition. Selling through its own websites only means a cut of 10% (see Flint, E-United, 2000, p. 74). Airlines are consequently strategically focusing on dominating the online ticket market. They however prefer their own websites to those of online travel agencies and joint airlines' sites. A survey revealed that in 2001, 63% (up from 60% in 2000) of the sample carriers saw their own website as the most important web-based service. Surprisingly, only 9% rated joint alliance sites or alliance websites to be most important - with a 1% point drop from 2000 (see O'Toole, IT Trends Survey 2001, 2001).

Airlines seem to be wary to loose control over a sales channel once Internet-based distribution is partly outsourced to a partnering site or an umbrella brand portal. The other reason for their reluctance lies in the lack of support from financial markets. With the hype in new economy markets coming to an abrupt end in 2000/2001, the availability of funds for the development of online sales strategies and IT solutions became scarce. Some airlines deliberately formed independent companies for their e-commerce distribution strategy in the mid to late 90s to take advantage of the immense market confidence and flow of capital. While sales results initially however did not reach expectations and further financing proved to be difficult, some of these efforts were abandoned and independent incorporation of airline e-commerce

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<sup>113</sup> See websites: [www.qualiflyer.com](http://www.qualiflyer.com); [www.star-alliance.com](http://www.star-alliance.com), [www.skyteam.com](http://www.skyteam.com), [www.klm.com](http://www.klm.com), [www.nwa.com](http://www.nwa.com), [www.oneworld.com](http://www.oneworld.com). As of 20.02.2002.



organisations occurred to a lesser degree. Cannibalisation between too many offers of online travel services on the Internet is another apprehension of carriers. Being financially and organisationally involved in own websites, joint e-commerce travel portals, auction sites, and others, airlines fear that further supply on the Internet jeopardises the profitability of the current providers.

Most ideally, and to sustain the concept of umbrella brands, multilateral partnerships should establish online booking facilities. The service promise of global reach can only be upheld once the customer receives the opportunity to purchase this offer under the banner of the multilateral partnership. Failing to do so will essentially leave partnership revenue potential untouched and substantially undermine the brand-building venture.

#### **5.6.5.6 Frequent Flyer Programme Co-operation**

The effectiveness of a FFP correlates strongly with an airline's capacity share in a market. The larger the share and an airline's proprietary network, the more advantageous a FFP becomes for passengers in collecting credits, in receiving FFP statuses and in redeeming attractive awards. Because of the non-linearity of FFP award structures, it is important to aggregate as many miles as possible in only one loyalty programme. Passengers are consequently induced to collect credits by being loyal customers. This is why FFPs are important tools for carriers to potentially dominate their home market.

However, in foreign markets, airlines' FFPs are far less effective. Small network sizes and little frequencies result in narrow incentives for passengers to collect and redeem miles. Once carriers are in collaborative agreements to mitigate the effects of inferior market presence, they should thus also strive for FFP co-operation.

In joint FFPs, passengers must be enabled to accrue and redeem miles in the individual partnering carriers' networks. Entire alliance networks could thus produce loyalty among a large client base, provided that FFPs are reciprocally acknowledged. This equals a quasi market extension as the partners' loyal group of passengers can be added to their own FFP member base. FFP linkage consequently is an integral part of codeshare agreements. Lufthansa and SAA operate a series of codesharings, complementary and behind-gateway. The carriers have consequently linked their FFPs Voyager and Miles & More, so that members of each loyalty programme can collect miles, regardless of the operating carrier. Mileage redemption also works for both airlines. Whether a passenger has collected miles on the Voyager or the Miles & More account, reciprocity in accepting miles for award flights is

guaranteed. FFPs thus are a strong competitive tool of alliances to even fight airlines in their home market. SAA's biggest rival in the intercontinental and local markets is British Airways. The British carrier and its local franchise partner British Airways operated by Comair offer one loyalty system - Executive Club - which gives the partnership a strong instrument to rival incumbent flag carrier SAA.

Due to this market power, regulatory authorities have been scrutinising FFP co-operation and actions have been taken (see Gilbert, 1996, p. 581). In the case of the merger between Lufthansa and the regional carrier Eurowings, the German competition authority Bundeskartellamt ruled that routes formerly served by Eurowings and Lufthansa have to be transferred to a new operator, European Air Express (EAE) thus protecting its market entry. In this connection, however, most important is the fact that EAE will be given access to Lufthansa's FFP Miles & More without being an otherwise legally fixed partner<sup>114</sup> (see N/A, Lufthansa/Eurowings: Kartellamt segnet die Fusion unter Auflagen ab, 2001 and N/A, Lufthansa/Eurowings Cleared Subject to Obligations, 2001).

As prerequisites for the gainful establishment and operation of a partnership in FFPs, some criteria have to be met. Firstly, collaborative FFPs should entail the entire network of the partnering carriers. The possibility to accrue miles on the network's exclusive routes leads to passenger confusion and dilutes the advantages of the programme alliance. In their codeshare between Johannesburg and Dubai, Emirates and SAA only reciprocally accepted each other's FFP on this specific route. Passengers travelling on either SAA or Emirates' remaining network and using the non-operating carrier's FFP, cannot expect to receive any FFP credits.<sup>115</sup> This configuration hinders loyal passengers from using the partnering carrier's entire network regularly. Collaborating airlines need to design their respective FFP transparently and make it easy to comprehend, which is best achieved by committing totally to reciprocal FFP co-operation.

Ideally, procedures regarding the accrual of status miles and mileage tiers to reach a frequent traveller status need to be harmonised. Base or bonus miles are usually accruable for any eligible transaction with an FFP partner airline. Status miles are, however, often solely

<sup>114</sup> The ruling of the Bundeskartellamt can be extended to Lufthansa's main competitor on the German market, Deutsche British Airways as well (see N/A, Lufthansa/Eurowings: Kartellamt segnet die Fusion unter Auflagen ab, 2001).

<sup>115</sup> This set-up is mainly due to the blocked space arrangement in their codeshare, which was never designed to be a comprehensive partnership.



granted to those FFP members making use of the FFP host carrier.<sup>116</sup> Theoretically, this situation can lead to peculiar situations. While a passenger is a SAA Voyager member, but a regular customer on Lufthansa flights, bonus mileage collection on the Voyager account is not a problem. However, the additional gratification for loyalty, the classification into an elite ridership status, e.g. gold or platinum membership, would not apply, as status miles are not accrued on the carrier issuing the FFP. The inability to gain a status would, for example, bar the passenger from entering lounges, or from receiving other value-added services. This configuration strongly contravenes the idea of seamless travel and equal passenger treatment in airline collaborations. Multilateral partnerships have, nevertheless, largely agreed on network-wide mileage collection for status classification as well as redemption. However, reciprocal acceptance of partners' passenger statuses for rank-related value-added product provision has still been not fully achieved.

Generally, partnering airlines should ideally harmonise their FFP policies. This harmonisation should include:

- Equal accrual policies regarding base and status miles, also with regard to bonuses in accruing miles for premium class travel.
- Harmonised award mileage thresholds. The required miles eligible for bonus flights might differ drastically in alliance networks. This in turn can draw award travellers from one airline to one where miles can be redeemed at a lower level. The same applies to thresholds for elite programmes.<sup>117</sup> Most ideally, passengers originating from different member carriers in a partnership should be able to accumulate the same benefits and receive the same qualitative awards for their loyalty. Differences do, however, apply. The example of SAA and Lufthansa illustrates these imbalances (for a similar calculation, see Bhagwanani, 2000, p. 91). The carriers operate a codeshare with reciprocal FFP participation between Johannesburg (JNB) and Frankfurt (FRA). While both carriers grant 5,400 FFP miles for economy class flights from JNB to FRA, the number of miles needed for an award flight differs. SAA Voyager Club members must redeem 60,000 miles for an economy ticket JNB-FRA-JNB, while Lufthansa Miles & More members must use 70,000 miles. The logical result would be that regular passengers collect miles in the FFP that

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<sup>116</sup> Status miles are thus also not accruable for any other FFP partner transaction like credit card usage, hotels, rental car services, and others.

<sup>117</sup> While, for example, a Miles & More member needs 150,000 miles to receive gold status, its Star Alliance partner, Air Canada, gives its FFP members the same status, with similar privileges for only 35,000 miles (see Bhagwanani, 2000, p. 93).

ultimately gives the best benefit - in this case, SAA.<sup>118</sup> Aside from any other incentives for airline customers to choose a specific FFP, the example illustrates the service imbalances that occur in partnerships. To avoid these imbalances and customer discontentment, Star Alliance chose, as of October 2001, to introduce a common quantitative system of mileage collection and redemption to all its members.

- Equal passenger service benefits, such as lounge access, excess baggage, preferential check-in, and free upgrades for FFP member statuses.
- Full reciprocity in redeeming the award in the individual FFPs. Reciprocity in collecting miles does not necessarily imply the ability to redeem miles collected in the one FFP to be applicable for awards with a partnering airline (see Rose, 1998, p. 204).
- Equal handling of mileage accrual on special fare tickets. Some carriers completely rule out mileage accrual for special fares, whilst others in the same network do allow for miles to be collected in full, or at least at a fraction (see Bhagwanani, 2000, p. 89). This was long the case in British Airways' mileage acceptance policy, which did not allow youth fares to qualify for mileage accumulation.
- Equal mileage expiration. Carriers are increasingly changing their policies to unlimited validity of accrued miles. However, among partners different regulations still exist. Air France introduced a non-expiring policy for its miles in 2000, a move influenced by its partner Delta Air Lines, which has long had such a policy.
- Equal lead periods for award redemption. Blackout dates for mileage redemption, lead times for award applications and supplementary payments for short-notice award applications vary significantly between airlines and should be equalled in partnerships.
- Equal policies in transferability of awards. While, e.g., SAA allows awards to be transferred to anyone, Lufthansa's Miles & More members can only transfer miles to first grade family members to a limited extent.
- Equal policies regarding the seat capacity available for award travel.

The Lufthansa/SAA example regarding mileage levels for awards, proved that distinct FFPs can have a competitive impact on each other. To avoid possible cannibalisation or a new competitive front, FFPs in close carrier collaborations can also be exclusively offered in

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<sup>118</sup> Under certain circumstances, this configuration can lead to a disadvantageous position for SAA. A passenger might only buy and fly on Lufthansa, but collect miles (awarded by SAA) on its SAA Voyager account and redeem the miles for a free intercontinental flight on SAA. While Lufthansa receives the yield from this passenger (as the passenger is not a codeshare traveller), SAA has to accommodate the non-paying award traveller.



individual markets. KLM and Northwest Airlines have thus chosen to establish their individual FFPs in distinct markets, which ideally embody the carriers' core markets.

In multilateral and highly integrative alliance networks, airlines should consider abandoning their individual FFPs in favour of a network-wide FFP. Cost savings potential are substantial and smoother operation and less interface problems could be experienced. In addition, a merged FFP would send out a strong signal to passengers as well as to competitors about the seriousness and the intensity of the partnership. The Qualiflyer Group of airlines has done so in merging their individual FFPs into the Qualiflyer Programme. The decision to merge FFPs should, however, only be considered by carriers with a long-term interest in the partnership. The process of de-merging a common FFP would be associated with an image loss and result in substantial costs.<sup>119</sup>

Shared information between FFP providers is not just a necessity to harmonise their products, but can also be used for marketing and CRM purposes (see Gilbert, 1996). Database marketing plays an important role in FFP co-operation. FFP member databases represent an immense marketing potential, since they contain valuable personal and demographic passenger information as well as data on individual travel patterns, which ultimately makes them surrogates for measuring customer value (see Schmengler and Thieme, 1995, p. 131-132). Data warehousing and linkages between other discrete airline systems, such as revenue accounting or yield management, could make an FFP an even stronger tool (see Flint, Value beyond Miles, 2000). Airlines are, however, hesitant to share these data as they see them as a main source for the development of marketing strategies and thus fear that an exchange would foster misuse.

In summarising the above, and to provide leads on how to collaborate successfully regarding loyalty programmes, the following separate steps should ideally be taken:

- Reciprocal FFPs throughout the entire network
- Harmonised FFP policies
- Elimination of competition between the individual FFPs
- Joint usage of FFP data
- Integration of the partners' FFPs or establishment of an entirely new partnership FFP

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<sup>119</sup> Currently, the members of the Qualiflyer Group are in the process of deciding whether to maintain the common FFP or to re-establish individual FFPs.

### 5.6.6 Joint Information Technological Partnership Configuration

In configuring airline partnerships, IT demands play an increasingly crucial role. The reasons primarily reside in the nature of air transport that is internally highly dependent on information technology exchange and processing requirements within the industry, as well as with its environment.

Different forms and instruments of IT collaboration regarding standard applications, ERP software, other internal operation systems and IP based systems have been described above (see 4.4.3.2.1). Collaborative activities are mainly based on the notion of saving on development and maintenance costs and of enhancing communication and processes within partnerships. The key prerequisite of IT configuration in airline partnerships is thus to establish IT compatibility in the respective collaboration areas promptly and effectively. However, these goals are currently not achieved - neither individually nor collaboratively. On average, airlines spend about 2,8% of their revenue on IT, a comparatively low figure, considering its strategic importance. This view is supported by IT professionals, since they quantify the expenditures to successfully develop and maintain the competitive IT edge of commercial carriers as approximately 5% of their revenue (see O'Toole, IT Trends Survey 2001, 2001).

The reasons for this disdain are operational and functional insufficiencies such as the dearth of skilled personnel, especially with airline experience, the sheer lack of financial capabilities and resources being concentrated on disparate proprietary legacy systems. IT is further perceived to be a business supporter rather than a business driver. In addition, the fair judgement of IT integration as complex, especially the orchestration of multilateral partnerships among members, results in less dedicated integration approaches.

Finally, while airline partners might be willing to share reservation, check-in and FFP information, carriers are reluctant to share financial and revenue data or details on agreements with high-level customers (see Baker, *Behind the Handshake*, 2001, p. 68). The result is that less than 50% of all airlines share IT application or systems within their partnership, which again contradicts the widely accepted view of IT as a key success factor (see O'Toole, IT Trends Survey 2001, 2001). This limitation on investment is having significant implications, since the arrival of digital integration is constantly changing the demands made of customer sales and CRM, airport operations as well as aircraft maintenance and revenue management.



The challenge for airline partnerships is thus to make time and resources available in order to gain a lead as early as possible. Strategies culminating in a coherent collaborative IT set-up must be formulated, resources attributed and plans implemented as promptly as possible (see Azoulai, 2000, p. 11). IT should be made part of the partnership enterprise's core strategic planning, with the following sequence of events being planning and implementation prerequisites.

- Commitment to a collaborative IT strategy, most ideally agreements and decisions on board level (see de Pommes 1998, p. 27). This managerial commitment should be feasible according to technological fitness.
- Assessment and definition of key areas of IT co-operation, functionally and geographically, based on the degree of integration, and fundamental as well as strategic partner fitness. This assessment is decisive as the type, size, instruments and forms of operation call for different solutions regarding for example, revenue and inventory management. The same applies to ticketing. While one airline might have implemented ticketless travel, a partner still uses paper tickets. The varying level of technical sophistication among prospective members, as well as the size of the airline operations consequently affects the development of a supporting IT vision and implementation strategy (see de Pommes, 1998, p. 29).
- Definition of the resulting information technological requirements, based on the aforementioned assessments.
- Decisions for either a stand-alone multi-user communication tool, or a fully integrated approach. The advantages and disadvantages are obvious. While the usually IP-based stand-alone solutions are less costly, more standardised, less user-training intensive and allow for swift expansion to other carriers, these middleware solutions have a less binding character. Fully integrated approaches are more expensive and time-consuming in development and implementation, and, under certain circumstances, can be interpreted as anti-competitive by regulatory authorities.<sup>120</sup> However, they allow for more specific, partnership-related data warehousing and processing, while not requiring any translation tools.
- Agreements on common usage of one CRS. CRSs are in many cases excluded from collaboration in IT. This is often due to the entrepreneurial involvement a partner might

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<sup>120</sup> This applies to common revenue systems of carriers operating in the USA without having gained antitrust immunity (see Feldman, *This is Progress?*, 1999, p. 46).

have in a CRS company, long-term contracts, or simply a strong commitment to a specific CRS provider.

- Possibility of a further integration of other IT functions into the common system.<sup>121</sup> The collaborative system must allow other tools and functionalities to be added in the course of the partnership to respond to changing environmental and internal conditions and requirements.
- Communication of the new collaborative IT vision to all levels of the organisation (see de Pommes, 1998, p. 29).

Collaborative IT requirements will be given more attention in future airline partnerships. IT solutions are attainable, communication is made quicker and more reliable due to increasingly narrow world-spanning data webs. The possibility of IT outsourcing and ASP facilities intensifying IT usage and common strategies is widely available. The organisational involvement of airlines in the development and maintenance of IT systems can thus decrease, while the widespread availability of solutions poses a competitive threat to use IT effectively. What applies to individual carriers is also pertinent to airline partnerships. With some bi- or multilateral partnerships being early movers in collaborative IT technology, thus capitalising on - as yet marginal - benefits, coherent IT becomes a key issue in partnership configuration to profit from synergy effects and, ultimately, to be in an advantageous competitive position.

### 5.6.7 Codesharing Guidelines

Having described different forms of codesharing and their competitive implications in separate text sections above (see 4.4.3.2), it remains to clarify the key prerequisites that make codesharing a successful collaborative tool.

Codesharing links networks of co-operating carriers. Theoretically, codeshare partners can jointly market the partners' entire network as quasi-online connections, thus giving both allies significant competitive value. Consequently, codesharing should comprise as many feasible destinations as possible in partners' overlapping, or complementary networks. It is, however, purposeless to offer codeshare connections that do not give customers any additional benefits. A passenger arriving in the morning on an SAA/LH codeshare flight, operated by Lufthansa, from Johannesburg to Frankfurt will benefit from a LH connecting codeshare to Düsseldorf within an efficient connectivity period. No major benefits, either for the passenger or for the

<sup>121</sup> IP is used by some multilateral partnerships as a cross-platform communication tool, which allows additional functions from the partner's legacy system to be added (see McDonald, 2001, p. 39).



airline codeshare partner would, however, be generated by a codeshare connection to London on the afternoon of the same day. The reasons are twofold. Firstly, SAA itself serves London directly, and, secondly, an efficient connection period is not given. Codeshare must thus fit into the established schedules of the partners, or the parties must be willing to change schedules in order to offer attractive and feasible codeshare connections within the banks of flights.

A further demand made of codesharing is its bi-directional feasibility. Only once the volumes or development potentials on both ends of the O&D markets are large enough are codeshare operations justified. For the above-mentioned example, both, the Johannesburg-Düsseldorf, as well as the Düsseldorf-Johannesburg markets must quantitatively and qualitatively (travel class composition) support the codeshare operation. The carriers' willingness to reinforce the codeshare by actively promoting and selling O&D connections relates directly to feasibility. This can be achieved by sales motivations, such as prorate agreements for the marketing carrier, or other sales incentive payments.

Reciprocity is another prerequisite to successfully establish codesharing. If operationally and legally practicable, carriers should equally contribute to complementary and parallel codeshare operations. While unilateral codesharing exists, it contains the risk of unbalanced contribution and allocation of benefits. The now terminated partnership between British Airways and USAir was based on such an asymmetrical agreement. Their codeshare only involved flights on USAir's network within the USA. USAir did not list British Airways' transatlantic flights, or connecting flights out of London as its own. The reasons resided with the bilateral agreement between the USA and the UK not allowing for this type of codeshare operation. In addition, USAir did not even request such authority from DOT. Consequently, the effects of the codeshare were more valuable for British Airways than for USAir, as BA kept most of the revenues resulting from the agreement (see United States General Accounting Office, *Airline Alliances Produce Benefits*, 1995, pp. 32-33). Trying to maximise benefits unilaterally, the codeshare partnership had lost its focus to collaboratively prosper, which eventually lead to its termination.

The sharing of risk and the allocation of benefits must be clearly defined by the type of codesharing, e.g., freesale versus block codesharing. Airline partners should be flexible in altering general types of codesharing to accommodate individual demands and maximise revenue for all involved.

The distribution chain frequently opposes codesharing because of its inherent risk of passenger deception. A demand developing from this likely passenger reaction and the possible sanctions associated with them, is for airlines to ensure comparable quality standards in all aspects of the air transport service value chain, the fare class assignment, passenger loyalty aspects and the provision of sufficient passenger information.

To summarise, codeshare action should only be established once the following factors are principally achievable. In the process of a priori partnership fitness evaluation, airlines seeking codeshare partners should consider these aspects and be prepared to alter their own organisation in order to achieve maximised codeshare benefits.

- Given a feasible operational and regulatory background, equal contribution and benefit allocation should be envisaged.
- Both directions of O&D connections must be practicable and successfully sellable.
- Connectivity of behind-gateway codesharing must be effective.
- In the case of blocked space codesharing, the agreement must be supported by special prorated agreements.
- If benefits are mutual, in the case of a unilateral codeshare, the marketing carrier should receive a sales incentive payment.
- Consumer protection and welfare issues such as quality, compatibility and sufficient information should be guaranteed.
- Codesharing must be well-communicated throughout all levels of distribution.
- Codesharing must be flexible in accommodating short-term demands of the collaborating carriers.

### **5.6.8 Collaborative Airport Operations Management**

To a significant extent, seamless travel, which is one of airlines' driving motivations for entering into partnerships, is procedurally realised by airport operations. To establish frictionless airport transactions, ticketing, check-in, lounge access and baggage handling, procedures should be delivered in accordance with network-wide standards. In many cases, the demands made to procedurally and qualitatively offer ground service standards congruent with the partnership's promises, are only attainable by arranging airport infrastructure and co-ordinating ground service provision within an alliance network. While cost savings in joint passenger handling are argued to be spin-off benefits, this aspect should also be taken into consideration (see Buyck, *The Big Move*, 2000, p. 53).



To increase connectivity - the much cited benefit from airline partnerships - allies should ideally be situated in the same terminal, should share or operate neighbouring lounges and should have concentrated aircraft stands and common handling operations.<sup>122</sup> However, congested airports with dispersed and size constrained terminal infrastructure do not always allow for alliance partners' closely positioned check-in, waiting and service facilities. Especially European airports, which were habitually built close to city centres, are very size constrained, and were never designed to be classic transfer hubs. Partnerships thus most often find themselves in the situation of not being able to offer convenient connectivity due to airport layouts that simply do not allow for inter-partnership transfer (see Baker, Slow Shuffle, 2000).

The notion of alliance terminals has long been the focus of airline partnership management. The requirement of physical closeness of alliance partners at airports best demonstrates adhesion between allies and allows for untroubled passenger service. On the other hand, airport authorities need to realise that it is also for their benefit that alliances are situated in close vicinity to each other. An increase in transfer traffic via alliance hubs highlights the airport's importance and enlarges its revenue stream. The negotiation process for terminal space has thus changed. Airport authorities are now dealing with groups of carriers, for which facilities have to be provided. In some instances, however, the co-operation of airport management is described as reluctant, with preferential treatment being given to the home carrier - particularly at government-controlled airports. Airlines have to be aware of this situation.

Airport re-design and extension must be considerate in fulfilling the accommodation needs of the ever-growing alliances, while carriers themselves must lobby and manage their specific plans to collaboratively smoothen passenger service and ground handling. This is why in some multilateral partnerships special staff are assigned to implement alliance relocation programmes at airports. These airport task groups within multilateral partnerships co-ordinate the co-operation between airport authorities, ground-handling agencies and partnering airlines in all airport-related issues. Lufthansa has followed a unique route in the lobbying of its alliance airport needs by jointly developing and building the new terminal at Munich airport with the local airport owner (see Pinar, 2000).

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<sup>122</sup> According to some industry executives, smooth baggage transfer among airline partners, in particular, is the most important issue to be solved in airport operations in order to deliver seamless travel within an alliance (see Buyck, *The big Move*, 2000, p. 53).

Airline partnerships have to focus on the closeness of their collaboration before deciding on cost intensive, collaborative airport measures. While it can be a long-term venture to develop or build an alliance airport infrastructure, the partnership itself might not endure. Before negotiating or planning common alliance terminal layouts, carriers have to ascertain the sustainability of the partnership. Initially, an accurate partnership fitness evaluation should have proven the potential stability of the collaboration, while partnership management should have built-in safeguards for the partnership's perseverance. As environmental factors can influence the cohesion of allies, the partnership should be evaluated with regard to its durability prior to engaging in airport-related investments. Provisions regarding the flexible layout of the alliance airport appearance in case of changes in the partnership composition have to be taken into consideration. On the other hand, airlines must strongly and individually make their alliance demands known to airport authorities in order for them to accommodate the alliance's needs.

#### **5.6.9 Collaboration in Sourcing and Outsourcing Non-Core Functions**

As previously discussed (see 3.4 and figure 4.4), non-core business functions, of which vertically-orientated production input is a component, have always been a part of an airline's proprietary value chain. Historically, airlines thus had a high production depth. Swissair Group, the holding company of Swissair, was a very diversified company offering a wide range of services to its own holdings and investments, to airline partners in the Qualiflyer Group, as well as to third parties (see Machatschke, 2000). It is not only since the financial problems faced by the Swissair Group at the beginning of 2001 and its subsequent demise - which was substantially due to its scattered holding structure - that the airline industry has opposed maintaining in-house diversification. Increased demand for market orientation brought about by deregulation and intensified competition, forced airlines to divest from business units with supporting functions. Simultaneously, new possibilities arose to source airline input factors cost-effectively through markets, with B2B online solutions being among the latest trends. Consequently, airlines, with some exceptions, deliberately reduced their production depth through outsourcing or procurement via third parties.

In part, airlines are suspicious of outsourcing, as they fear relinquishing their authority over traditionally controllable business units and input factors. Concerns about dependency and appropriation caused by the sourcing of products and services that were once integral parts of the value chain, furthermore highlight airlines' reluctance (see Pilling, *Drive to Outsource*, 2002, p. 38 and for outsourcing strategies see Rutner and Brown, 1999). In some way, airline



partnerships can present an answer. Acquiring services or products from an alliance partner can, to a certain degree, guarantee compliance with quality standards and fair and reliable business conduct. Outsourcing within a partnership can additionally help to reduce transaction costs, since business interactions have already been established among the transacting partners. Reciprocal partnership reliance likewise propagates outsourcing within airline collaboration. Accordingly, both formal and informal influence can be exercised on the quality of the outsourced product or service.

Standardisation is seen as another positive aspect of intra-partnership product and service sourcing. While costs are generally positively affected by standardised high volume output, standardisation in multilateral partnerships' commitment to core-product and value-added product harmonisation signifies advantageous aspects as well. Implementation of collaborative efforts in service and product design as well as in IT aspects is thus facilitated. Especially with regard to the above-mentioned IT integration, standardisation of products sourced within the partnership can avoid interface and implementation obstacles. Lufthansa's subsidiary, Lufthansa Systems, increasingly provides IT solutions to members of the Star Alliance, furnishing them with the quality of a standardised product and allowing them to adapt more easily to one another. This applies to ground handling and catering as well. Many members of the Star Alliance have consequently switched to the services of GlobeGround or SkyChefs, Lufthansa's respective ground handling and catering subsidiaries, in order to reach a higher level of standardisation.

Pooling resources for the development and production of non-core business functions within a partnership structure can also facilitate addressing the concerns regarding outsourcing. Pooling generally helps to best allocate resources and to concentrate know-how within a given group of partners and can drive the attainment of a critical size (see Steininger, 1999, p. 344). Best practices in separate parts of the air transport value chain are often spread over the entire alliance. Lufthansa is, for example, known for its technical expertise, while Singapore Airlines is globally renowned for its above-standard inflight service. Consolidating best practices to make them freely available within a partnership adds qualitative as well as quantitative advantages. Joining intra-partnership products and service procurement, further guarantees that allies will gain sufficient control over price and quality.

The demand to procure services and products jointly is probably one of the most basic and trivial motivators for collaboration, and yet the most difficult to implement. Reality proves that these theoretical concepts are far from being practically implemented. While outsourcing

and procurement through markets are increasingly well organised, intra-partnership strategies to commonly reap these benefits have not become highly sophisticated. Individual airlines establish and use, e.g., B2B portals, but do not do so in their individual alliance sphere. The potential of collaboratively sourcing input factors thus remains largely untouched.

In constituting the above-mentioned areas of collaboration in procurement, pooling and even outsourcing, some prerequisites have to be fulfilled. Alliance partners can only benefit from joint action once specifications and logistics as well as distribution concepts have been harmonised. It is equally important for alliance partners to compare costs for which they are individually billed. However, this seems to be the core problem in procurement alliances. Airline partners are not willing to procure jointly and openly, as they often do not wish to disclose expenditures to their partners, which especially applies to aircraft (see Steininger, 1999, p. 346).

Alliance partners need to undergo a paradigm shift in order to take full advantage of the positive effects of procurement collaboration. Changing paradigms requires that an alliance partner deliberately offers its products and services within the group of allies. Airlines would be more likely to use the products or services of a befriended alliance partner, than those of unknown suppliers, or business partners. The relationship between the partners should be accustomed to identifying each other's needs and to developing superior products on a partnership-wide scale. Personal contacts with alliance partners should be used to sell and source products and services. This gives transacting airlines significant competitive advantages over external suppliers, especially if the transactions are of mutual interest. On the one hand, the procuring carrier increases its attractiveness as an ally in a partnership, and, on the other hand, the producing carrier provides the receiving carrier with a sense of trust and security. Each individual airline could thus establish itself in a buyer/seller matrix of relationships among all partners.

#### **5.6.10 Collaboration-enhancing Human Resources Management**

Human resources issues have been repeatedly described as obstacles to efficient partnership operations. The immanent danger of opportunistic personal behaviour in all matters of collaboration stems from the reluctance of staff to collaborate with erstwhile competitors. While the importance of staff-related issues in alliance operations is well known to allies, little is done to redress the problems associated with them. Individually and/or collaboratively, advanced human resources management can mitigate the risk of anti-



collaborative staff behaviour. Accordingly, interairline partnerships require a special class of personnel management to successfully prepare, negotiate, handle and control collaborations.

The two spheres represent discrete, yet linked, demands made of human resources in interairline alliances: skills and attitude. Skills are embedded in a company, a group of employees, or a particular person. Ideally, alliance management skills should incorporate (see Spencer Stuart, 2001):

- Strategic viewpoint and vision: understanding where and how value can be created through synergies among carriers (see Spekman et al., 1998, p. 764)
- Marketing knowledge: specifically cross-marketing, branding and, ultimately, sales issues
- Operations skills: in a nutshell, to operationally ensure that the promise of seamless travel is kept
- Technological proficiency: with specific regard to IT
- Understanding in handling regulatory bodies
- Experience with labour relations and labour strategies, in particular in connection with alliance-based labour negotiations and action, as well as innovative value propositions (see examples in Horn and Barkin, 1998)
- Mediating skills in balancing the needs of the individual airline and the overall partnership network
- Ability to handle politics within the airline and the partnership, as well as dealing with the dynamics of a group of parties
- Good relationship management skills: building consensus with employees, layers of management, and different cultures; convincing staff within the partnership that the alliance is important and wielding authority to commit the airline to the partnership

While the first of the above-mentioned skills are functional line or staff skills, and general business knowledge gained from educational background and experiences, the latter are competencies to handle the intensely social nature of partnerships. These are, to some degree, unteachable diplomatic skills in social adeptness, flexibility, persistence, determination and result orientation - ultimately a social and alliance mindset (see MacAvoy, 1997, p. 13 and Spekman et al., 1998, pp. 764-765).

Consequently, executive partnership managers must be carefully selected, which might be a difficult, but not impossible task. However, aligning the attitude and perception of the workforce remains complex. Partnership deficiency is often attributed to lack of staff

commitment, whether sales personnel do not collaboratively distribute the partnership's products, check-in staff lack responsibility for partnership-related issues, or cabin crews do not sufficiently recognise the demands of partners' passengers on board. Especially front-end employees, who are in direct client contact, have the potential to convey either a positive, united and flawless image of the airline collaboration or the apposite - that the partnership is merely a loose collaboration between individual carriers.

Image-damaging action visible to the consumer most probably has immediate effects on collaboration. What is, however equally, dangerous to a partnership operation, is a lack of commitment by commercial or technical staff. The possibilities of such a lack of commitment are multifarious. Technical staff might not give as much attention to maintenance details vis-à-vis a partnering carrier as to the own airline; infrastructure planning might not include the partner's demands to a satisfactory extent, or general communication with an ally might be tardy and inefficient. A third category, which affects the latter two, is a lack of organisational structures for partnership action. While, e.g., two carriers are global allies, organisational structures might not allow for the carriers' sales managers to co-ordinate their activities in third-country markets.<sup>123</sup> Furthermore, a dearth of resources and commitment might not allow for the establishment, or proper internal and external partnership management of structures.

Key questions are how and from where the human resources opposition to partnerships originates. The most obvious answer seems to be the general reluctance to act amicably towards former competitors. Aviation has long been without significant competition through regulative separation and protection. After deregulation, however, global rivalry and profit orientation lead to increasingly aggressive competitive configurations. To enhance staff commitment and to increase output, these new competitive circumstances were well propagated by top management. However, after alliances have been formed, thoroughly established foe images need to be abruptly relinquished, which leads to staff facing conversion dilemmas. Competitive stereotypes are difficult to eradicate and personnel, at least for a transitional period, cannot easily adapt to the new situation.

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<sup>123</sup> An example serves to illustrate this situation: two closely allied European carriers, both operating services to South Africa, did not have any managerial structures or tools in place to give either their South African sales managers or regional general managers the opportunity to co-ordinate their sales action in the local market. As alliance-related issues were the responsibility of the Europe-based alliance management departments, the local staffs' hands were tied as far as the co-ordination of their activities was concerned.



Secondly, the new collaborative status competes with the brand-based self-image. Airlines have long built strong corporate identities based on product quality and status, which have been emotionalised, externally as well as internally (see e.g. for Southwest Airlines Flint and Donoghue, 1997, p. 43). Airline employees see a dilution of their brand self-image through partnerships, especially those collaborations incorporating brand consolidation, umbrella brand or superbrand concepts. Whether or not justified, the results are usually prejudiced, destructive behaviour towards the passengers and staff of the collaborating airline.

Thirdly, staff perceive collaborations as jeopardising their own position. While cost-effectiveness is a keyword in collaborations, personnel, especially in high-wage European and North American countries, fear retrenchment due to outsourcing. Negative consequences originating from this perception might lead to action by individual staff members and by trade unions (see Horn and Barkin, 1998 and Spencer Stuart, 2001, p. 81).

Fourthly, employees have difficulties in understanding a partner firm's business culture and its employees' societal and ethnic culture (see Bell, 2000, p. 106). While cultural fitness is one of the most important suitability criteria, and top-level management might be able to cope with the challenges of different cultures, this is not necessarily so for the wider personnel base. The mere fact that a partner's corporate language is foreign to staff, can lead to friction. This is equally applicable to communicational standards, bartering and simple dress codes, which may potentially lead to destructive behaviour.

This is why sophisticated human resources management, organisational structures and general governance as well as internal communication should offset any kind of negative effect on horizontal partnerships. Communication seems to be one of the most important of the latter. Unless airlines are multilaterally organised under an umbrella brand, education regarding partnership issues is more the exception than the rule. The goals, the content and the members of the partnership must be systematically communicated to all employee levels. Cultural differences should be actively disclosed in order for staff to comprehend specifications in interacting with the partner - also by way of dedicated culture management. According to the above, it is not just a necessity to train and inform front-end staff about the alliance, but the entire workforce should be included. A comprehensive partnership spirit must be built with total dedication from top leadership and information must be continuously provided to the staff in case of ad hoc inquiries as well as more detailed requests.

The possibility of motivation through gratification for collaboration-enhancing behaviour should be envisaged for some functions. Another form of motivation and enhancement of staff knowledge regarding the collaboration is to exchange staff from all hierarchy levels among partners, possibly on a rotational basis. Some of the multilateral networks provide platforms for staff get-togethers, also by means of regular meetings in a demonstratively informal atmosphere, e.g. Lufthansa's Partner Forum. The organisers' key intention is to familiarise participating staff with the partner's ethnic and business culture and to become acquainted with one another.

Airline partnerships have to appreciate the driving as well as the sanctioning potential of staff in airline collaborations. While the degree of conceivable staff sanctions varies with an airline's individual position in a partnership, managerial structures and communicational tools need to be in place to mitigate the risk of negative effects on collaborations.

#### **5.6.11 Joint Policies vis-à-vis Regulatory and Competition Authorities**

The current legal and regulatory environment mitigates the possibilities of airlines operating freely and consolidating in a manner that has long been a standard in other industries. There are indeed carriers that still prosper under regulated global air transport competition, but for most carriers, and certainly for passengers, the current status cannot be satisfactory. Airline partnerships represent an attractive way to partly circumvent regulation, but in establishing partnerships, airlines quickly encounter operational boundaries instituted by national authorities trying to regulate air transport. The question is how carriers can jointly enhance their position vis-à-vis regulatory bodies, in order to advance their collaboration and ultimately to be offered ways to true consolidation.

Liberalisation has been spurred by the existence of airline partnerships. Airline collaboration reflects the evolution of carriers in a global network industry. The USA in the early 1990s particularly wanted to improve service for travellers and shippers, while maintaining its leadership role in international air service. These two issues, globalisation and sustaining competitiveness were only achievable through partnerships, which airlines had been building for some time, and which needed to be encouraged and facilitated. Access and traffic rights were thus required to address business and passenger requirements. Nationally, the trends that were experienced in aviation induced new paradigms in giving carriers business opportunities.

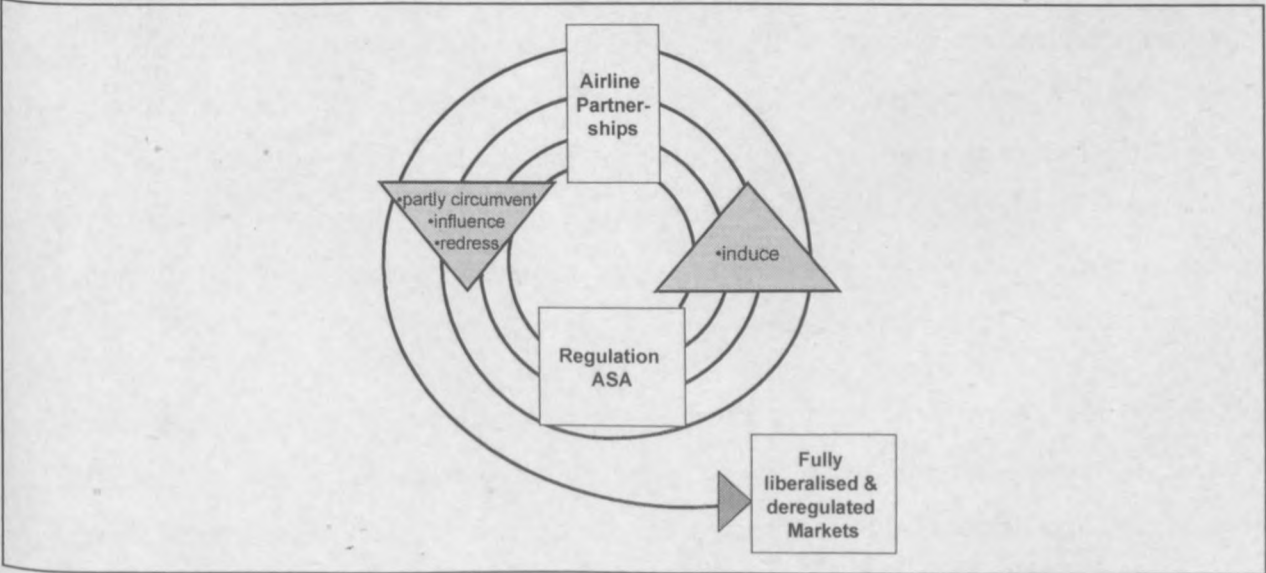
Consequently, liberal air service understandings - particularly open skies agreements - were desired means by which to equip the airline industry with the required operational freedom.



Open skies agreements, specifically for traffic with the USA, are usually tied to antitrust immunity granted to individual airline partnerships. KLM and Northwest Airlines were pioneers in this field, as they motivated their application for antitrust immunity with their strategic goals to exploit the potential benefits of their partnership more fully. In 1996, pressure from Lufthansa and United Airlines spurred the German government to bring forward the implementation of a full open skies agreement with the USA (see Doganis, 2001, p. 35). In January 2002, Air France and Delta Air Lines received antitrust immunity from the USA, paving the way for open skies agreements between France and the USA.

On the other hand, partnerships have also hindered the development of modern, liberal air traffic accords. The case of the bilateral quarrels between the UK and the USA strongly hinges on the application for antitrust immunity by British Airways and American Airlines. The USA made their approval of the application conditional, which for now has been rejected by the carriers.<sup>124</sup> Horizontal airline collaborations thus have certainly stimulated more liberalised ASA, with passengers and competitors benefiting. Co-ordinated behaviour towards state authorities advances the applicants' positions, but also can push open new opportunities for other market players. It is this connection that makes airline partnerships generally, and specifically by co-ordinating their behaviour, valued as one of the most important drivers to further deregulation and liberalisation of the global air transport markets. Figure 5.6 depicts this connection.

Figure 5.6: Deregulation and Liberalisation Spiral



Source: own figure

<sup>124</sup> As of February 2002.

### 5.6.12 Realisation and Distribution of Benefits in Airline Partnerships

The realisation of benefits from interairline partnerships by distributing the gains is of great importance, initially for the choice of the partnership and thereafter during its operation. This demand, although logical and trivial, can be difficult to achieve, particularly considering the organisational and commercial set-up and the determinants leading to the success and failure of airline collaborations. Whereas the incorporation of a joint venture as an independent entrepreneurial entity allows for the distribution of benefits based on the initial input of the collaborating firms, the situation for airlines and their occasionally loose collaborations is somewhat different.

While the provision of input factors, such as flight equipment, can rotate or alter among allies, and seats in, e.g., codeshare free-sale agreements can be distributed through various channels, a pre-determined quantification of benefits by the common operation is almost impossible to achieve. Quantification becomes even more intricate through the inherent characteristics of an airline's products. The air transport product's features of batch production and simultaneity of output and consumption specifically yield certain difficulties in quantifying the benefits of horizontal interairline collaboration. Before accurate benefit distribution can be carried out, performance tracking systems, measuring the value of the partnership, need to be in place.

The notion of fairly portioning the benefits among partners is important from a profit generation, cost-effectiveness and market access perspective. However, what is equally important is the avoidance of opportunistic behaviour and the inducement of collaborative action among partners (see Doganis, 2001, p. 220). The fact that airline partnerships are prone to and allow for multiple areas of expedient conduct was previously discussed. Especially partnership action in overlapping networks can be influenced by the particular interests of the allied parties. Pre-defined equitable apportionment of gains can provide closer binds among partners, enhance trust and harmony and can decrease transaction costs of a permanent and recurring negotiation of benefit allotment (see Gahl, 1990, p. 67).

Different models of revenue sharing have thus been developed to avoid friction among partners, to provide incentives to stay in a collaborative relationship and to tackle the technical and operational challenges of fairly distributing benefits. However, revenue sharing needs regulatory approval, particularly for multi-connecting O&D markets, as pooled and shared revenue on certain legs can lead to anti-competitive behaviour by airline partnerships.



Incremental revenue sharing apportions the incremental benefits of a collaboration. A basis for benefit allocation is usually defined upon the results of the individual airlines' reference period prior to collaborating. After implementing the alliance, an evaluation of the extent to which benefits have developed from the collaboration, needs to be conducted. The change in revenue will be shared according to an initially agreed model between the operating and marketing carrier in a codeshare agreement and other partners in a multilateral collaboration. Incremental revenue sharing is an easy tool with which to distribute benefits among partners, but it is a comparably weak incentive for airlines to behave co-operatively. As the incremental revenue generated by the partnership is small in most instances, airlines do not feel a strong motivation to discontinue opportunistic behaviour (see Steininger, 1999, p. 368-371, see example, *ibid.*).

Total revenue sharing does not just divide the incremental, but also the total revenue for a given spectrum of flights operated collaboratively. Which flights will be included in the calculation largely depends on negotiations of the partnering carriers. A possible spectrum of integrated flights can range from selected intercontinental flights, flights operated only in overlapping parts of the networks, to comprehensively including all flights in a partnering carrier's network. The share is based on pro-ratio calculations which are predicated on, for example, original capacity (ASK) and class mix, original yield mix, original load factor, hub attractiveness, brand status of an alliance partner or strength of the sales organisation (see example in Steininger, 1999, p. 371). Essentially, a revenue sharing model has to take into account the individual production and sales input. The establishment of a fair sharing model can thus entail a larger number of parameters, which have to be taken into consideration in order for airlines to receive an impartial compensation for their collaborative action. A systematic approach, supported by IT structures and linked to other IT systems, can thus be difficult. No participating carrier should be worse off - after being compensated - than before the partnership and the distribution of benefits must mirror the individual carriers' contribution to the network.

Profit-sharing is probably the most intensive form of benefit distribution. As costs and income are shared, this form practically emulates a merger. Striving for an optimisation of the overall partnership result rather than the individual members' results, is a key demand for constructive collaboration. This form of benefit distribution thus indeed has positive aspects. The system - if not adjusted to a pre-partnership situation - has inherent difficulties, especially once partners' cost structures - formally and quantitatively - differ drastically. A carrier would

have to be responsible for a partner's inefficient cost management and would sacrifice parts of its own benefits. This, in turn, would decrease the incentives for partners to enhance their product quality and their internal organisation. Similarly to the above-mentioned revenue sharing tools, profit-sharing should therefore ideally calculate the historical status of income and cost prior to entering the partnership as well as the exchange of information on an individual airline's future financial commitments.

The organisational set-up of the benefit distribution schemes mentioned above can be multifarious. One key demand for revenue or profit-sharing systems is to be linked to flexible revenue or yield management systems. This is a demand which is not easy to fulfil, considering the constraints to sharing these competition-sensitive data.

A solution could be to appoint an independent service bureau with the task of sharing revenues. This neutral third party could induce the airline partners to keep score of the benefits and costs and how they are distributed. The entity would include representatives from each of the partners and would be charged with maximising the net benefits of the alliance and helping the partners to reach agreements on the distribution of benefits. To facilitate the process, it would create and operate a formal system defined by the sum of the alliance's parts, the constraints, endowments and opportunities of each of the partners - and the single objective of maximising joint benefits. The formal system could typically be based on different cases. The historic case would calibrate the system by replicating the market shares and revenues of the allies before the partnership. A base case adjusts for actual and contemplated changes in the competitive environment, assuming that the partnership has not yet been formed. The alliance case finally accounts for the benefits of the partnership by estimating the changes in market shares, revenues to the individual parties and changes in passenger composition (see Berardino and Frankel, *Keeping Score*, 1998, pp. 83-84).

In short, a commonly agreed formula for quantifying and re-allocating partnership benefits to individual members will need to be devised in order to underscore the mutual benefits of the alliance to each of the partners. The formula for benefit allocation must be based on a composite of individual carrier performance - historically as well as currently - measured against agreed performance objectives as well as overall partnership profitability (see Berardino and Frankel, *Alliances: The Next Step*, 1998, p. 71).



## 5.7 Summary and Implications

Interairline partnerships are currently the main competitive device in the passenger air transport industry. Their formation and operation should consequently receive the highest attention. Evidence suggests, however, that airlines lack partnership configurational and managerial capabilities from the outset of the collaboration until its end. This is why the section above described key procedural and configurational issues spanning the entire collaborative life-cycle.

Interairline partnerships, due to their often loosely structured nature, do not effectively exploit all potential gains from their collaboration. Usually this can be explained by the inability to grasp the entire beneficial partnership capacity in all collaborative areas, and on the other hand, by the friction among allies that prohibits smooth partnership operation. However, the two issues often concur. A lack of harmony, the inability to reap full gains and the ultimate failure of partnerships, underscore the fact that civil passenger airlines have not yet managed to internalise the key demands of horizontal collaboration. While the macro environment and the industry itself are currently not ready to face the challenges of real market-driven concentration, the successful command of partnership capabilities becomes even more of a competitive advantage. Only those carriers and networks that implement best practices in collaboration configuration will be at the forefront of competition once true consolidation is established.

The above discussion has delineated some core aspects of partnership set-up and operation that assist airlines to better achieve mutually acceptable results from collaboration. The clear definition and internalisation of prerequisites and success factors in airline partnerships can essentially lead to the avoidance of conflict and the improvement of the realisation of partnership returns. In the best case, airlines intensively formalise the process of establishing and operating horizontal partnerships on the basis of the previously-described issues, ideally, following the mentioned sequence of events. Formalisation would entail the establishing of self-evaluation and partnership due diligence processes, demarcation of the range of possible collaboration areas, and the dedication to the forms and intensity of the partnership.

Discrete stages of concluding partnership activities and selecting appropriate allies must be followed to avoid rushed decisions and inappropriate collaborative orientation. In the earliest stages, partner fitness assessment can detect suitability in the light of the allies' respective strategies, their individual characteristics and the envisaged type of co-operation. The

## 6 The Synergy Audit Model – a Framework for Assessing Linkages in Interairline Partnerships

### 6.1 Introduction

Synergy is a popular term, especially in connection with the motivations for, performance patterns and results of collaborative company activities. But while synergy is regularly referred to, the terminology lacks proper description in the context of horizontal collaborations. Despite synergies surfacing in many collaborative functions, and thus appearing in various quantitative and qualitative evidences, there is no overarching concept nor an overall measure suggesting the potentiality of synergy. Furthermore, models associated with the detection and continued assessment of synergies during a partnership's entire life-cycle are currently non-existent.

The need for managerial capabilities to govern and advance interairline linkages to essentially enhance the benefits of their collaboration has been indicated (see 5.6). The distinguished requirements can now be addressed by scrutinising the synergy nomenclature in its various descriptive dimensions. In addition, the findings made lead to the development of a model to detect and enhance synergy in airline partnerships - the synergy audit.

The synergy audit consists of a number of individual parts and causal relations that are subsequently discussed and delineated. The focus of the synergy audit is on the synergy concept as a nucleus. It additionally incorporates a synopsis of the previous chapters' findings, particularly those referring to prerequisites and success factors. Based on a distillation of collaborative drivers and the most suitable configuration of interairline partnerships, a framework for detection and advancement of collaborative benefits can be conceptualised.

Epistemologically, the methodology used is as introduced. The combined analysis of both primary, empirical data and secondary sources of information forms a synthesis towards the development of a synergy audit (see chapter 1.5 for the methodology and the appendix for the interview guideline). The development of the support tool A.PIE (Airline Partnership Intensity Evaluator) was assisted by another round of intensive discussions with recognised industry experts.



## 6.2 Synergy - a Description with Special Reference to Company

### Interrelationships

The term synergy is of Greek origin and is composed of *syn*, meaning with or together, and *ergon*, which means deed/work/opus or to be active. In essence it means "to work together". Synergy is thus equivalent in meaning to the term co-operation. Etymologically originating from the Latin *co*, for together, and *operari*, to work, co-operation means "to work or act together toward a common end or purpose" (see The American Heritage Dictionary of the English Language, 2000). Both terms thus have etymologically equivalent meanings: "concur or co-action". The combined usage, in particular in business science, occurs regularly - tautology notwithstanding (for an intensive empirical study on the terminological usage of synergy, see Rodermann, 1999, pp. 10-35 and for tautologies, see Bierck, 1999).

The term synergy finds application in every scientific discipline, but is only metaphorically used in a similar fashion. Social sciences, natural sciences and theology use the terminology synergy in related, yet different connotations (see Sandler, 1991, pp. 8-10 and Rodermann, 1999, pp. 36-37). Synergy in social sciences, for example, describes the co-action of groups and individuals as well as creative processes such as problem-solving mechanisms (see Krebs, 1996, pp. 14-16). Natural sciences apply the term synergetics to outline the interaction of research matters from distinct disciplinary perspectives (see Rodermann, 1995, pp. 258-259). Synergy, for example, has come into medical usage to describe the combined action of organs - e.g., to produce circulation - or joints - to produce movement. In pharmacology, synergy describes indications caused by the joint usage of two or more drugs. The biological meaning refers to unique species in an ecosystem that adapt and coexist (see Eisenhardt and Galunic, 2000, p. 92).

The aforementioned disciplines all employ synergy in a neutral, descriptive way. The focus is on the delineation of the interaction of the respective objectives of scrutiny, either intra-disciplinary or inter-disciplinary. However, all definitions or individual utilisation have their systematic perspective in common. Synergy as a terminology describing the act and the results of working together should always be seen within formal boundaries. A more practically-oriented definition of synergy could consequently be the "(...) behaviour of whole systems unpredicted by the behaviour of their parts taken separately" (Buckminster Fuller, 1975, p. 8). This delineation mirrors the original impartial meaning of synergy.

Business science also employs a systematic descriptive approach, although paired with a qualitative synergy appraisal. Synergy is now entrenched in management jargon and the investment community where it is used prolifically as well as indiscriminately (see Campbell and Luchs, 1992). Narrowly defined, the integration of at least two intellectual or physical value creation processes by jointly using production factors, should lead to cost savings and/or revenue enhancements in a given period (see Ropella, 1989, p. 21 and Osegowitsch, 2001, p. 18).

The often cited  $2+2=5$  arithmetic - as a synonym for synergy - dates back to 1965, when business scientist Igor H. Ansoff described synergy as the main component of his product-market expansion strategy options. The embedded synergy theory denotes that a firm seeks a market posture, where the combined performance of current and future strategic business units should be greater than the sum of the individual parts.<sup>125</sup> Synergy is thus a benefit - the additional value increment - to be achieved by interrelationships between business units of a single firm (see Ansoff, 1965, p. 75, Goold and Campbell, 1998, p. 132, Rodermann, 1999, p. 40). The co-operational sphere of this concept is limited to intra-firm collaboration, supporting conceptualised expansion strategies such as product/market development, market penetration and diversification strategies. Synergy, according to Ansoff, is correspondingly "(...) concerned with the desired characteristics of fit between the firm and its new product-market entries" (Ansoff, 1965, p. 75).

Initially, synergies were evaluated according to the firm's strategic intent. While highest synergies were expected to be achieved in market penetration strategies, diversification was supposed to produce, synergistically, the least benefits (see Ropella, 1989, pp. 178-179). Firm diversification, however, became part of competitive strategies in the 1970s. Synergies were thereafter also pursued in creating competitive advantage and superior performance in diversified, multi-business firms. In due course, a number of research efforts attempted to scrutinise the positive effects of resource sharing in multi-business firms (for an overview of resource sharing, see Ensign, 1998). However, the synopsis of all basic synergy concepts, namely the benefits or interrelationships between business units and product-market expansion as well as resource sharing in diversified firms, leads to the notion to uncover a

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<sup>125</sup> The performance figure used by Ansoff was Return on Investment (ROI). A portfolio of strategic business units accordingly heralds positive synergies if the ROI of the portfolio with synergies is higher than the ROI of the portfolio without synergies (see Ansoff, 1965, p. 31, 38).



heuristic criterion with which to evaluate alternatives in the strategic decisions of a single company.

This school of thought has triggered the founding of synergy management, which, in contrast to the widely practised portfolio management, aims at positively utilising diversification while decreasing complexity by identifying affinities within the firm (see Hirzel, Leder & Partner (Hrsg.), 1993, Vizjak, 1994, Rößl, 1994, Rodermann, 1995, pp. 304-309, Goold and Campbell, 2000). The concept of synergy management denotes that the economics of one business in a symbiotically beneficial relationship with another business is based on sharing and exchanging business resources (see Clarke and Brennan, 1990, p. 11). Sharing resource conceptually implies to contribute to the  $2+2=5$  equation, whereby organisational structures, and personnel group action can support that quest by identifying product and market affinities and by developing corresponding strategies (see Ropella, 1989, pp. 176-188 and Osegowitsch, 2001). Synergy management explicitly entails joint, co-ordinated action, and is thus strongly concerned with interrelationships inside the firm. Co-evolution, with reference to biological symbiotic relationships (species help one another in a mutually advantageous manner) and their development, has also been recently used to describe synergetic intra-business relationships. Synergies are accordingly achieved by establishing a culture of creative and fair collaboration and competition within multi-business firms and between their units (see Eisenhardt and Galunic, 2000).

In a wider functional interpretation, which has emerged into the more popular definition, business synergies also entail the effects of external collaborative strategies.<sup>126</sup> The original arithmetic is accordingly regularly altered into  $1+1=3$  for a one-to-one intercompany partnership. Collaborative strategies are consequently more competitive relative to other configurations. The common reference to win-win solutions in collaborations essentially describes the positive aspects of partnerships (see e.g. Lorange and Roos, 1991, p. 64). The fundamental maxim of business scientific synergy concepts - the total being bigger than the sum of the individual parts - thus remains applicable, also for external growth. An evaluation of synergy for envisaged collaborative action is consequently the key in deciding on the feasibility of a collaborative venture. Synergy thus serves as a guiding premise in external growth strategies, just as much as it positively describes the benefits of internal growth.

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<sup>126</sup> Ansoff's description of synergy is often misinterpreted to originally entail synergies occurring in external growth. It is, however, focused on interrelationships between firm units in the firm's product-market strategy.

Conceptually, acquisitions, mergers, or collaborations are consequently only justifiable if they result in a satisfying level of synergy between the firm entities (see Mahajan and Wind, 1988, p. 59).

Whether for internal or external growth, a delineation of synergy must also explicitly honour the existence of negative collaborative factors. Disadvantageous determinants can be described as dissynergies pertaining to operational disturbances, original conflicts, adaptation or integration problems and expenditures such as any co-ordination and compromise costs (see Lutz, 1993, p. 183, Goold and Campbell, 1998, p. 131, Osegowitsch, 2001, p. 18). It is comprehensible that win-win situations from collaborative activities can occasionally only be achieved to the detriment of certain value chain activities, organisational, managerial and personnel structures (see Vizjak, 1994, pp. 32-33). Business science, however, has strongly dressed synergy with positive attributes, where the combined effects of interaction between forces or agents are greater than the sum of the individual parts. Synergy is consequently created when activities that have relatedness are shared, or organisational structures, cultural and strategic orientations - either intra-firm or interfirm - can be beneficially combined. To underscore its positive business science connotation, synergy is thus the positive aggregate of beneficial and disadvantageous parameters in collaborative action. Clearly, the benefits of sharing must outweigh the costs of co-ordination and other dissynergies, thus resulting in a positive balance of the advantages and disadvantages of a collaboration, essentially creating a net advantage.

However, this notion should not lead to the conclusion that synergy is a singular, discrete motivator for collaboration, equivalent to quantifiable motivations of cost reduction, revenue generation and, more qualitatively, circumvention of regulatory barriers. Synergy is certainly likely to be explicitly mentioned as a key motivator and goal in company collaborations, but, again, the usage is often tautological. Cost-effectiveness in collaboration is a synergy, as are a combination of revenue generation and knowledge transfer. Synergy is a generic term for the net advantage of varying collaborative activities.

The business science connotation of synergy implies a conjunctive symbiotic meaning, whereas entities involved in the collaboration (business units, individual firms, and persons) have an association of mutual benefit. While following this delineation, specific interairline synergies can be described in a more detailed fashion.



## 6.2.1 Dimensions of Synergy Potential and Synergy Effects

The aforementioned definition of synergy and its motivational character has naturally found application in airline collaborations. Synergy considerations are ideally at the heart of corporate strategies and play a leading role in partnership activities (see Leibold and Slabbert, 1994, p. 2, Eisenhardt and Galunic, 2000, p. 91). The quest to enhance performance by jointly employing production factors and resources, both internally and externally, has been strategised by international passenger airlines for some time. The initial decision to undertake collaborative action and the subsequent commitment to partnership fitness or relatedness should at all times heed the specific benefits of collaboration (see Harrison et al., 2001, pp. 680-681). Consequently, partnership synergies need to be discovered and planned in the preparatory phase of the collaboration. In subsequent collaboration stages, airlines must maintain their focus on identifying and enhancing synergy. Interairline partnership synergies must be concomitant to the entire collaborative life-cycle (for alliance life-cycles, see Spekman et al., 1998, pp.760-763).

The principal dimensions of synergy prior to entering a partnership and while being involved in collaborative agreements are synergy potential and synergy effects.

Synergy potential describes the anticipated - ex ante - positive effects of exploiting the benefits of future interrelationships of firms (for a definition see Rodermann, 1999, p. 124 and Madhok and Tallman, 1998, p. 327). For airline partnerships, the initial evaluation of partnership fitness or relatedness is, to a large extent, based upon initiatory synergy potential recognition (see also Bucklin and Sengupta, 1993, p. 35). Here, the benefits of interrelationships have to be balanced against diseconomies. The anticipation of advantageous results from collaborative efforts either brings prospective partners together mutually, or triggers unilateral courting.

The pursuit to match individual company characteristics is largely driven by the core inducements to collaborate and the likely economic benefits. In a particular case, the comprehension of synergy potentials thus corresponds with the initial motivations to collaborate and the partners' unique profiles. Synergy potential is therefore not necessarily equally perceived by all partners. Allies' particular profiles, individual backgrounds, sizes, value chains, and strategic orientations might only result in partially overlapping synergy expectations (for benefit overlap, see Khanna, 1998, pp. 341-346). While one carrier might purely seek a codeshare partner to generate and distribute traffic, its prospective ally might

pursue further advantages, such as know-how transfer or future capital linkages, in the process of its privatisation. The partners thus each have their own benefit expectations, while they should certainly also strive towards common benefits. In most cases, the initial complementarity of inter-business combinations and their benefit expectations are likely to herald synergistic prospects (see Harrison et al. 2001, p. 680). In addition, the expected benefits from collaborative action can change over time, migrating from operative to strategic benefits, or increasingly including more parts of an airline's value chain. Partners learn from each other, or undergo structural changes, either internally or externally (e.g. privatisation) induced. The potential for mutually benefiting might thus change for either the benefit or to the disadvantage of the collaboration. This is why an assessment of synergy potential should not be exclusively and statically conducted at the outset of the partnership.

In the course of the collaboration, partnering firms should furthermore dynamically and continuously seek and liberate further in situ synergy potential. The scope of any synergy potential assessment is accordingly subject to changes. While initiatory synergy potential evaluation is based on the cardinal motivations of the collaboration, the quest for synergy potential in the course of the partnership can be a creative process of occasionally seeking new and/or uncharted collaborative areas which promise further mutual benefits. Synergy potential thus needs to be made a partnership-managerial topic, spanning the entire collaboration life-cycle from its outset to the ultimate termination of the relationship.

Synergy effects are effectuated synergies or realised synergy potentials - in situ and/or ex post. Synergy effects are thus the materialisation of synergy potential and chronologically unfold in the later stages of the partnership (see Hirzel, 1993). The values of synergy effects for the partnering firms are determined by their individual quantity and/or quality. However, synergy effects are also partly determined by a temporal dimension. The actual time, frequency and duration of their occurrence influence their momentum for the partners. In addition, synergy realisation follows a progressive trajectory. In the start-up phase of resource sharing, diseconomies can be rather high, which then have to be balanced against limited benefits. Ideally, diseconomies should diminish in the operating stages of the partnership and thus absolute synergies can be expected to be higher (see Vizjak, 1994, p. 32). In general, the later synergy effects materialise, the more intermittently they arise, the shorter their duration, the less they avail the collaborating parties (see Sandler, 1991, pp. 128-138).

This time frame and the realisation pattern of synergies are a critical parameter in intercompany relationships and this parameter regularly leads to disturbances in partnerships.



However, the time span that lies between the identification of synergy potentials and the realisation of synergy effects greatly varies with the underlying synergy content or synergy area (see Ropella, 1989, p. 223). While operative collaboration goals are rapidly accomplishable, more complex, strategic objectives take more time to synergistically materialise. Consequently, one key demand of synergy effects is to materialise as quickly and as evenly as possible considering the individual temporal demands for the materialisation process.

A further requirement of synergy effects is that they should be equal. Synergies, as the positive effects of collaboration must qualitatively and quantitatively be symmetrical for all the parties involved in the collaboration (see Bleeke and Ernst, 1995, p. 99 and Klein, 1996, p. 15). This demand is discussed in greater detail below (see 6.3).

Generally, in identifying synergy potentials and ultimately evaluating synergy effects, a multidimensional, qualitative approach can be employed. The effective synergistic value can only be assessed once the dimensions promise a profitable collaborative result. This dimensional consideration, both for synergy potential and synergy effects, could exemplary entail the following aspects with discrete parameter values (see Sandler, 1991, p. 129 and Rodermann, 1999, p. 127):

- Time of occurrence: immediately - later
- Frequency of occurrence: once - recurring
- Duration: transient - perpetual
- Location of occurrence: internal - external (e.g. in external vs. external growth)
- Abstract relation: qualitative - quantitative
- Type: interdependent (describing the relationship between factors and processes) - interactive (concerning the strategic company level)
- Effect: positive (true synergies) – negative (diseconomies)
- Form of appearance: costs (reduction) - revenue (enhancement) - power considerations

Synergy dimensions can be made a useful tool in distinguishing synergies. They can serve as a table of contents in identifying the characteristics of beneficial partnership action. However, for collaborating airlines genuine applicability can only be achieved once the dimensional consideration is paired with a functional perspective (see areas of synergy 6.2.4) and a transparent quantification of synergies (see synergy measurement 6.2.5). A clearer understanding of the potentials of synergy in interairline partnerships as well as of realised

synergy effects can thus be delineated. The first step leading to a comprehensive synergy audit model has now been taken with the description of the broad dimensions of what is expected from interrelationships - synergy potentials - and what is actually produced by these interrelationships - synergy effects.

### 6.2.2 Sources of Synergy

Sources of synergy represent the most elementary rationale and the first cognitive element in the synergy concept. Sources of synergy recognise - for different collaborative areas - the prime objectives, both qualitative and quantitative, for engaging in partnership action.

An interpretation of sources of synergy, thus their origin, firstly depends on the formal definition of synergy. Synergy denoting the positive effects of internal growth strategies in multi-business, diversified firms certainly leads to a different terminological deduction of its sources than synergy as the benefits of external growth strategies (see Grote, 1990, pp. 72-77 and Spickers, 1994, pp. 43-45). External growth strategies also occur in a range of variants, with specific focus on certain parts of the value chain and/or diversification intentions. Collaborative directions obviously strongly impact on the unique sources of synergy that they indicate. Subsequently, and in the context of this dissertation, synergies and their sources in horizontal airline partnerships are scrutinised.

Sources of synergy have been repeatedly described by scholars as the fountain of collaborative benefits. Size and scope effects, power and risk considerations, customer satisfaction, circumvention of restrictive elements as well as collaborative compensation are regularly mentioned as the source of positive effects from company interrelationships. In theory, industry-focused synergy research thus regularly describes very individual sources of synergy inherent in the particular branch it is scrutinising (see e.g. Meining and Rennert, 1990, pp. 73-74). However, all descriptions have in common that they essentially outline the core motivations for collaborating (see e.g. Ropella, 1989, pp. 234-235, Grote, 1990, pp. 81-86, Sandler, 1991, p. 5, pp. 28-94, Krebs, 1995, pp. 10-13). These core motivations can differ according to the collaboration's general orientation, its anticipated life-span and the very unique characteristics of the participating players. For the purpose of simplification, general categories of synergy sources or motivations are used.

Motivations for airline collaboration were categorised and individually described (see 4.3.2). They also serve as main categories of sources of synergy and entail the following:



- Cost considerations (scale/scope effects)
- Revenue motivations (scale/scope effects)
- Market- and regulation-induced motivations
- Power/strength motivations

Collaborative motivators, thus sources of synergies, are closely related to synergy potential. Perceived sources of synergy mark the intellectual boundary for the definition of synergy potential in a first, pre-collaborative stage of the partnership.

### 6.2.3 Arenas of Synergy

While sources of synergy describe the rationale behind synergy potentials, arenas of synergy conceptualise influencing drivers in the detection and materialisation of synergies. Arenas of synergy represent the universe in which benefits actually occur, in which they should occur in interrelationships, or which ultimately affect synergies. These influencing drivers originate from procedural considerations in creating value and are determined by other, secondary, components as well as external dimensions.

A functional categorisation of synergies that is regularly employed, is built on a company's value chain paired with other enhanced input factors, or secondary activities, such as technology, human resources, capital and information. The airline value chain, supplemented by secondary activities, are used to functionally define synergies. Potentially or actually, synergies surface in these functional areas which are the domains that also determine the qualitative and quantitative value of synergies.

The value chain system itself is embedded in the integration dimensions of corporate culture, knowledge basis and corporate mission, representing the arenas of synergy creation (see Spickers, 1994, p. 45 description and figure below). The convoluted structure of arenas honours the interlinked characteristics of synergy, which are not only identified by the confined core value creation process, but are also externally determined. Correspondingly, synergy potential and effects are not exclusively produced by an airline's internal functions alone, but also by occasionally intangible external and behavioural as well as attitudinal factors. In researching the synergy environment, these integration dimensions are, however, regularly neglected, as only the very procedural parameters are evaluated (see Spickers, 1994, pp. 44-45, Meining and Rennert, 1990, Ensign, 1998, p. 659). On the other hand, the success of many airline alliances is greatly influenced by these non-core business functional issues. Especially in external growth strategies, which do not incorporate capital linkages, and thus

lack strong formal binding, integration dimensions tend to steer the alliance towards prosperity or failure.

The portfolio-type approach in defining and measuring synergies for segregated functional areas is largely accountable for companies disregarding wider spheres in their consideration of collaborative benefits. Confined approaches of concentrating on the mere functional aspects of synergy creation do not produce satisfactory results. A lack of holistic perspective by the drivers of partnership benefits, leads to non- or under-performance in uncovering synergy potential and transferring them into synergy effects (see Lorange and Roos, 1991, p. 69).

Ideally, in revealing synergies, the following should be considered as part of synergy arenas:

- Corporate culture: a firm's culture must be amenable to and able to stimulate positive effects from collaborative action. Airlines' specific susceptibility to the strong influences of business and ethnic cultural factors, which play an important role in unleashing the benefits of collaboration, has been discussed (see 5.3.2.3).
- Knowledge basis: knowledge needs to be present in order to detect and develop potential partnership synergies. Best practice and skills sharing must support the quest for collaborative action. An attitude of learning must support the aggregation of further wisdom to day-to-day business, but also to the management and the advancement of the collaboration itself (see Goolb and Campbell, 1998, p. 132).
- Corporate mission: the corporate mission, embodying the strategic intent, needs to sustain collaborative strategies, thus the initial decree to generate synergy through interrelationships (see Goolb and Campbell, 1998, p. 132). It has been proven that many airline partnerships have been entered into on the basis of ad hoc necessity, rather than well-reflected choice and strategic intent. Lack of a corporate mission, and supporting partnership strategies, can thus have a negative impact on synergy creation.

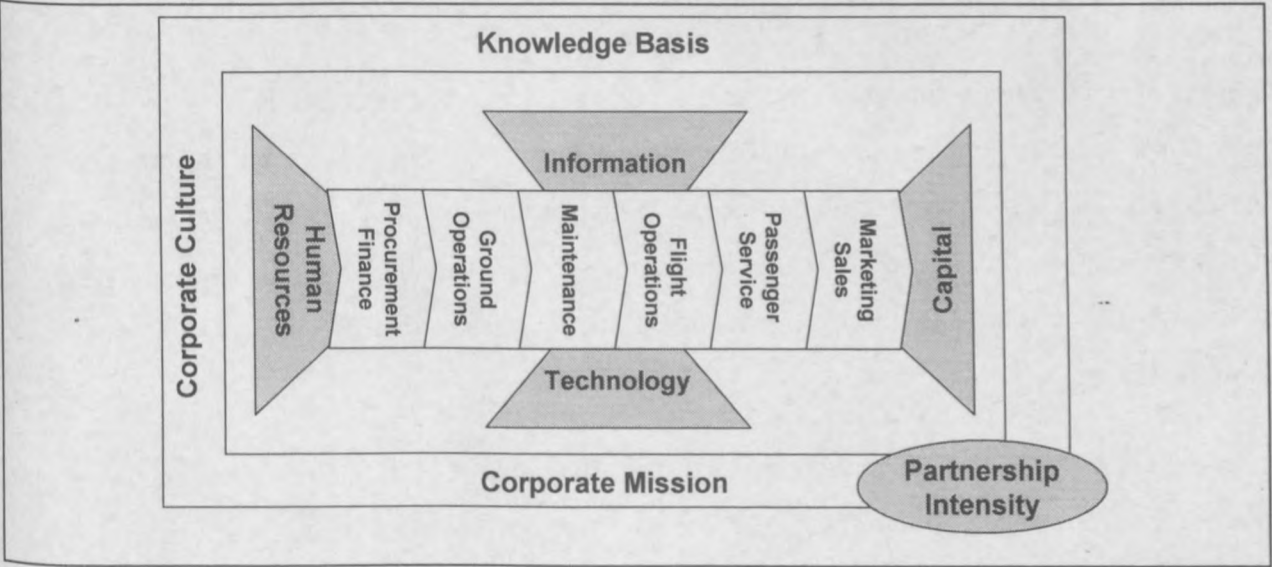
In connection with partnership suitability, the earlier-described organisational fitness essentially incorporates these integration dimensions. Only if a company is organisationally suitable with regard to its collaborating culture, its strategic resolution to horizontally ally and its knowledge base is capable of grasping the prerequisites, the requirements and the procedural skills to collaborate, can synergies be mapped.



Most important, however, is an issue that lies beyond integration dimensions and the value chain system. Partnership intensity eventually drives synergy (see also Howarth and Kirsebom, 2000, p. 13). While synergy potential evaluation may detect a host of benefits potentially to be achieved in interairline collaborations, the realisation of these potentials might be inhibited by a lack of partnership depth. Relatedness in executing the partnership - in situ - is thus an important synergy driver and ascribable to synergy arenas (see Ensign, 1998, p. 659). Only if the partnership is sufficiently intense, will the realisation of synergy potentials into tangible effects be successful.

The following figure illustrates these synergy arenas.

Figure 6.1: Synergy Arenas in Airline Alliances



Source: Spickers, 1994, p. 45 and own supplements

6.2.4 Areas of Synergy

Synergies are commonly titled according to the functional areas from which they are derived. The original synergy definition distinguished between sales, operation (production), investment and management synergies (see Ansoff, 1965, pp. 79-80, Rotering, 1993, pp. 38-46, Ensign, 1998, p. 658). Generally, synergies can be generic to parts of an organisational structure (business unit, departments, groups) or functions, but can also be generated by spilling over to other fields and affecting these with varying intensity. Consequently, synergies are not discretely occurring, but interrelating, benefits.

Without engaging in a deeper discussion on their causes, synergy areas are now emphasised. Sources of synergies, which logically apply to areas of synergies, are mirrored by the motivations to collaborate, which have been thoroughly scrutinised (see Day, 1995, p. 297).

#### 6.2.4.1 External Synergies

External synergies are primarily concerned with the positive effects that interairline partnership structures expect to exploit in their relationships with the environment in which they operate.

A main component of external synergies is the influence that collaborative activities can have on circumventing regulatory constraints on carriers' market access or extensions. In addition, synergies can occur indirectly through co-ordinated behaviour vis-à-vis regulatory and/or competition authorities concerning the inducement of more liberalised market surroundings. The desire to reap external synergies in the spheres of deregulation and market liberalisation, ranks very high in airlines' motivations for collaborating, particularly in the light of restrictions on consolidation.

Co-ordinated behaviour can produce significant effects in joint negotiations with political authorities, infrastructure providers, and air traffic control regarding extension or alterations of facilities. The pooling of negotiation power, either in straightforward horizontal alliances, in associations or other forms of interest groups, has repeatedly aided in lobbying and motivating airline-related issues towards the mentioned parties (see also Goold and Campbell, 2000, p. 75).

External synergies can also surface in carriers' privatisation. Partnership action can thus produce gainful outcomes in respect of the ownership development of carriers. Airlines in partnership with other state-owned carriers can motivate the need for privatisation more strongly to their owning governments. Few cases have witnessed the inducement of further privatisation, initialised by the emergence of a strategic airline partner. In the instance of the partnership between KLM and Alitalia, the privatisation topic played an important role in negotiating the partnership, also with representatives from the Italian government.

External synergies also entail the positive effects that collaborations have on the joint market appearance of allied parties. While this area is strongly interlinked to marketing synergies, the position of an alliance airline towards the external environment features highly in carriers' synergy expectations. Aspects of status play an important role in externally presenting the alliance. In times of virtually mandatory airline collaboration, alliance membership can have significant effects on the status of carriers and the way markets and customers perceive them. As opposed to being unaligned, carriers might enjoy more appreciative capital markets and thus increased power towards suppliers and other stakeholders.



#### 6.2.4.2 Management Synergies

Management synergies generally develop from collaborating in managerial, organisational and administrative settings. The potential benefits from management synergies evolve with cost-effectiveness in avoiding redundancies, governing and gathering know-how, as well as in efficiently increasing managerial output. Thus, qualitative as well as quantitative dimensions drive management synergies, while qualitative synergy considerations definitely play a dominant role.

The exchange of knowledge and management skills is salient in delineating management synergies. Management skills, inherent to the collaborating parties, can be transferred to the new managerial tasks that develop during collaborative activities (see Ansoff, 1965, p. 80 and Goold and Campbell, 1998, pp. 135-136). An important aspect in any management synergy is, however, the fundamental claim to establish synergistic relationships among the management teams of collaborating parties. Before any formalisation of synergy evaluation can be conducted, the presence of functioning inter-partner management structures needs to be ensured. This is a prerequisite for management to be synergistically refined (see Leder, 1993, p. 19).

This demand respects the difficulties in harvesting management synergies. The reasons for these difficulties are twofold. Firstly, management synergies may not be achievable, because a true exchange of knowledge and management skills does not occur. Often, collaborating airlines are not even aware of managerial skills worth sharing. Weak partner knowledge and a rudimentary sense of the unique needs and capacities of partnership management are responsible for this state of affairs. The ignorance of managerial frailties to be mutually redressed, and little comprehension of the challenges associated with partnership management, leave the exploitation of management synergies untouched. This can occur because collaborating parties are simply not willing to actively share - give or take - managerial skills (for managerial implications of synergy generation in diversified firms, see Goold and Campbell, 1998).

Proprietary and appropriation concerns, dependency considerations as well as the individual self-image, prevent airlines from sharing knowledge. Secondly, and interrelated to the first aspect, is the depth of partnership integration that does not necessarily call for managerial collaboration. In most cases of interairline partnerships, the collaboration intensity is rather shallow and limited to very specific areas. As certain collaborative tasks, e.g. codeshare

agreements can, information-systematically, largely be handled in an automated manner, a more intensive partnership on managerial issues is seemingly not even required. However, even for these cases, synergistic management relationships need to be ensured. The presence of synergistically-focused management links between the collaborating airlines can spur resolution, particularly in the event of conflict and operational problems.

For more intensive partnership agreements, closer managerial collaboration can and needs to be achieved. The possibilities of managerial collaboration, especially in multilateral brand partnerships, are multifarious, yet decisive. While internal and external partnership management structures have been described above (see 5.5), it remains to be noted that governance synergies per se are not realisable by establishing joint partnership management organisations. Partnership management, if at all existent, is merely defined as a governmental and administrative function and serves as a platform for strategy design, operational handling and conflict resolution in a partnership. Synergy considerations usually play a less significant role. Thus, synergy has to be made a formal goal in managerial structures and its specific demands regarding resource sharing have to be instrumentalised. Consequently, formalised exchange structures, in particular knowledge and best practice transfer, are of cardinal importance. There is an abundance of possibilities to exchange knowledge, either on an as-needed basis, e.g. through interlinked information systems, or, more formalised, through training and/or staff exchange programmes. These have to be taken into account and, most optimally, need to be implemented.

#### **6.2.4.3 Synergies in Production and Networks**

Synergies in production describe all mutual cost-decreasing, scope, power, revenue and operational efficiency-enhancing advantages, originating from merging functions across the collaborating airlines' value chains. Most common among passenger carriers are the shared usage of capital intensive equipment (aircraft, maintenance and handling facilities, and airport passenger infrastructure) as well as co-ordinated production or production programmes. High occupancy rates increase and optimise revenues, efficient employment of personnel and physical equipment lead to lower unit costs, and thus scale effects.

Collaborative airline production is usually concerned with co-ordinated schedules in O&D markets. Network synergies, partly based on topological network density, arise in the production of appropriate connections between markets and through the joint usage of feeder and defeeder services. Interconnectivity (network oriented), intermodality (vehicle oriented)



and interoperability (institution oriented) concisely describe the synergy-producing dimensions in airline networks and beyond, in relation to other network structures (see Capineri and Kamann, 1998, p. 43).

Interconnectivity, to a greater or lesser extent, is therefore what has been currently achieved between carriers in their quest to harvest proficient results from territorial partnership action and hub and spoke concepts. Schedule co-ordination is thus the condition *sine qua non* for functioning interconnections. Aircraft employed by collaborating partners allow utilisation of a standardised infrastructure for handling purposes (e.g. airport ground handling) as well as with regards to the original transportation infrastructure (e.g. cargo container standards, seating/class standards).

Intermodality is a substantial synergy aspect and mostly touches on transportation issues that lie outside an airline's core transportation value chain. Intermodality has, however, only been accomplished on a very limited scale and its synergy potential lies somewhat unrealised. Airline partnerships as a whole have a very strong inward focus and only recently have modest efforts emerged in which synergies with other modes of transport have been exploited (see 3.2.4.1 for high-speed train linkages). While this aspect is very important in the design and functionality of future transportation concepts, airline partnerships need to master the challenges arising from intermodal transportation.

Interoperability is largely based on systematic compatibility of hard- and software equipment that airline partners utilise. Collective usage of CRSs, or CRSs adaptability, allows for common reservation, booking and ticket issuing standards. Common departure control systems facilitate passenger handling and allow for smoother staff rotation. Industry associations, such as IATA or ICAO, have additionally established standards that generally provide for interoperability in handling-related procedures.

As for the scope of the value of these synergy potentials, high partnership intensity can lead to worthy overall results. This is usually motivated by a deeper integration of systems and standards that can potentially be shared. More shallowly-oriented partnerships often only superficially glean synergistic effects in production and networks. Driven by a mere operational focus that is concerned with the very core transportation process, other lateral functions and tasks are neglected in their synergistic potential. To comprehensively and most effectively benefit from synergies in less intensive partnerships, airlines have to consider

integrating production functions that correspond with their partnership intensity, but have yet not been the initial focus of the collaboration.

#### **6.2.4.4 Synergies in Marketing, Sales and Distribution**

The benefits of mutually utilising revenue-generating functions and tools, also by means of saving costs for their establishment, are currently the single most important synergistic topic in interairline partnerships.

Synergies in marketing, sales and distribution can result from the joint usage of the marketing toolbox, distribution channels and distribution agents, of trade-names, and trade-marks of the collaborating firms (see also Goold and Campbell, 2000, p. 76). In addition, shared market intelligence as a supportive tool to distribution can add to synergy generation. Superbrand and umbrella brand concepts as well as collaboration in travel trade, corporate and Internet-based distribution, have been described above with specific focus on their beneficial collaborative impact. These profound forms of interairline partnerships unequivocally aim at benefiting from group action in distributing their joint products or jointly distributing their discrete products.

The principle sources of synergies in marketing, sales and distribution collaboration lie in revenue generation. Fast market extension or penetration through partnerships is one of the key motivators for airlines to collaborate. Cost savings for the set-up of a distribution organisation, marketing campaigns and the induction of changes in the demand structure is a further, although less important synergy factor. More strategically oriented are schemes that aim at realising synergy potential from joint branding. The main airline groupings have long started to establish new alliance brands, but at present their synergistic brand potential for the individual partners must be judged with some misgivings. Scope effects are currently realised and occur especially in connection with the previously mentioned shared sales facilities in the case of market enlargement strategies. An increase in revenue can consequently be achieved through an alteration in the demand structure, whereby airline passengers can successfully request extensive integrated products from airline partnerships (see Schmidt, 1993, p. 25). Thus, full passenger satisfaction essentially drives marketing, sales and distribution synergies.

The wielding of market power in respect of trade intermediaries is a further synergistic motivator. These synergies are also described as collusive synergies or power benefits from competitor interrelationships (see Pfähler and Lehmann-Grube, 1993, p. 130). As previously described, the power status of an allied group of carriers in dense markets, especially those



markets where one of the member airlines is a dominant hub player, can be substantial. Synergies in combining these powers in a horizontal group can be immense and lead to sufficient sales premiums.<sup>127</sup>

#### 6.2.4.5 Investment Synergies

In a narrow interpretation, investment synergies are the result of jointly using production facilities, common raw materials and inventories, thus sharing of tangible resources (for resource sharing in multi-business firms, see Ansoff, 1965, p. 80).

The joint usage of aircraft, maintenance facilities, spare warehouses, R&D efforts, service features, training facilities, management capabilities, and others, leads to positive effects regarding the initial investment into and sustenance of these areas. The list of areas where, potentially, interairline investment synergies can be achieved is easily extendable.

Each business territory that involves procurement and employment of strategic and non-strategic items can potentially yield collaborative benefits. Benefits thereby primarily originate from scale effects and, to a limited extent, scope effects. The aforementioned domains, however, only entail joint collaborative operations that promise direct internal monetary gains, either through joint procurement or operational enhancement. A limitation of the term investment synergy in these operative areas would make it only a further generic terminology for scale and scope effects. Investment synergies, particularly for intercompany relationships, incorporate a wider view of the equity and capital, as well as of an airline's asset situation. Investment synergies thus also entail capital market-related and hence external finance-related issues.

A survey found that on average companies' stock prices jumped by about 1% with each declaration of a new alliance formed (see Dyer et al., 2001, p. 37). In some market or company constellations, the simple announcement of a prospective collaborative engagement can lead to positive stock market reactions (see Ernst and Halevy, 2000). Investors evidently have a high regard for firm linkages from which partnership synergies can be expected and make them a basis for investment decisions (see Pfähler and Lehmann-Grube, 1993, p. 139, Goold and Campbell, 2000, p. 72). Thus, partnerships can create tangible stock value, a fact very seldom mentioned as a motivator for collaborative agreements. This connection, as does the sphere of investment synergy, obviously incorporates very immediate capitalisation

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<sup>127</sup> Also see 4.5 for a discussion of the negative competitive effects of combined market power.

Comparative statistical and empirically-founded analyses of the aforementioned kind, are nevertheless difficult to apply to the airline industry. With only a small number of airlines having substantial capital linkages or being entirely merged, a monetary-based synergy measure entailing value concepts and capital profitability, would produce limited plausible and universally applicable results. However, monetary-based synergy measurement does find application in airline partnerships within the limitations of the respective partnership, thus utilising portfolio-oriented approaches. For example, a confined codeshare agreement must ideally produce higher load factors, ideally higher yields and should contribute to the profitability of the routing for each of the collaborating partners (see above for distribution of benefits). Synergies should therefore be quantifiable in route result calculations. More comprehensive partnerships must consequently be evaluated with regards to the individual partnership areas and their distinct positive contribution to the allied carriers' performance (see above for motivations to collaborate (4.3.2) and Howarth and Kirsebom, 2000, pp. 9-17). A total quantification of synergy effects would thus comprise an aggregation of the effects of pre-collaborative vs. collaborative performance in all of the partnership areas.

However, a complete quantification of positive collaborative effects is not attainable, nor with regard to the plurality of company goals, which additionally entail non-quantifiable objectives.<sup>129</sup> Thus soft, qualitative and intangible factors such as business cultural, communicational and work climatic issues, can also actually contribute to synergy effects, but often remain imponderable. Regarding the frailties of monetary synergy measurement and the imponderables surrounding the consequences of partnership action, some other synergy measure needs to be developed specifically for airline partnerships.

#### **6.2.6 Summary - a Taxonomy of Synergy**

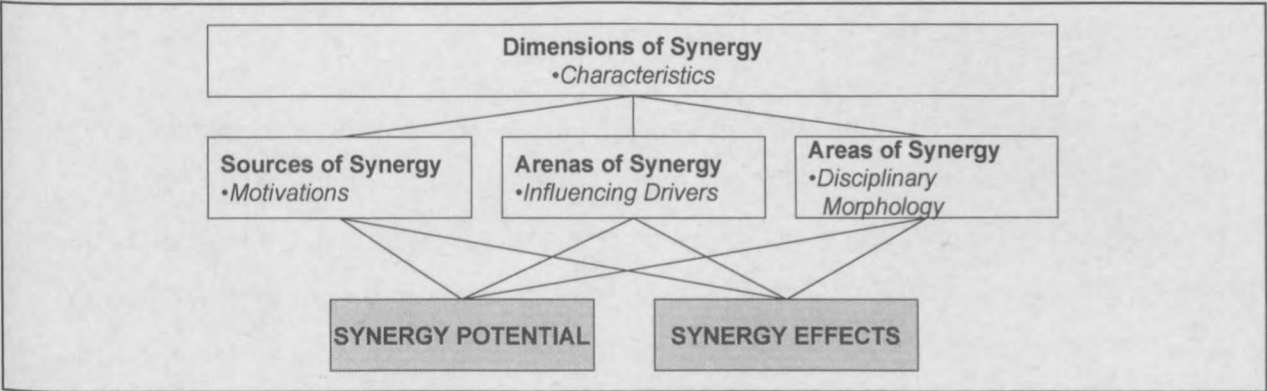
The description of different aspects of synergy has introduced a terminology that is subsequently used in order to discuss aspects of auditing synergy in interairline partnerships more specifically. Figure 6.2 summarises these synergy aspects and brings them into a visual relation.

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<sup>129</sup> However, it can be argued that all qualitative synergy effects necessarily lead to quantitative, tangible benefits, following a period of delay (see discussion in Sandler, 1991, pp. 148-149 and pp. 154-155).



Figure 6.2: Aspects of Synergy



Source: own compilation

- Dimensions of synergies characterise positive collaborative effects by utilising a range of parameters and their individual values. For each further sphere of synergy, dimensions provide a guideline in distinguishing and evaluating them.
- Sources of synergies delineate fundamental springs of gains from interrelationships and rationalise why collaborative action leads to benefits. Sources of benefits thereby correlate with the original motivations for collaboration. This is why these sources have a strong individual character, inherent to each collaborative transaction.
- Arenas of synergies entail the influencing drivers. They give rise to a more holistic view of the synergy concept, also incorporating intangible corporate and cultural aspects.
- Areas of synergy finally locate where synergies should ideally surface. Their morphology can be itemised to a more or less high degree of aggregation, largely depending on the width and depth of integration.

These aspects of synergy affect both, synergy potential and synergy effects. While the first describes anticipated synergies, the latter is concerned with their realisation.

6.3 Dissynergies as a Symptom of Diseconomies in Interrelationships

The realisation of potential opportunities depends on how effectively linkages between activities and firms are actually managed and how well the partnership can handle environmental issues. That is, just because a collaborative opportunity exists does not mean that it may be possible to fully develop it or bring it to fruition (see Ensign, 1998, p. 657). The synergy hoped for - potential - and the synergy actually achieved - effect - may be quite different - in the most drastic case, antipodal. In a directional approach, synergies can consequently also be negative (see Ansoff, 1965, p. 76). Thus, to renew the mathematical

synergy equation mentioned above, 2+2 might equal 3 - with the total being smaller than the sum of the individual parts (see Ensign, 1998, p. 658).

In cases of mergers or capital linkages that do not result in positive synergistic outcomes, the term diminutive fusion outlines the anti-synergistic arithmetic (see Grote, 1990, pp. 76-77). A further expression that originated in the 80s, when synergy was at the forefront of the motivation for corporate development, is synergy trap. Synergy trap basically describes the unsatisfactory recognition that expected synergistic relationships have not materialised (see Hirzel, 1993, pp. 32-36, Goold and Campbell, 1998, pp. 135-136). The concept of failing to fully benefit from positive effects in collaborations is also described as dissynergy, the antonym of synergy. The term dissynergy is subsequently to be used.

The reasons why synergies do not realise can be multifarious. Whether strategies work against synergy, incentives are misaligned, mistrust prevails, or the collaborating companies' cultures do not match, synergy killers inhibit company linkages (see Goold and Campbell, 2000, p. 86). Often, the failure to realise synergies stems from the inability of companies to understand the benefits of interrelationships. Misunderstanding potential economic advantages can be related to differing expectations regarding the outcome of the partnership and/or dissimilar interpretations of the results. Partnering firms additionally fail to realise the full set of collaborative benefits, as the entire, holistic spectrum of opportunities is not recognised (see Lorange and Roos, 1991, p. 69). However, companies that have a clear, explicit knowledge of the full spectrum of potential benefits arising from collaborations and which thoroughly examine themselves and their prospective partners, should be able to minimise the risk of dissynergies developing - at least in the pre-collaborative phase.

The previous chapter (chapter 5) assessed some key prerequisites in successfully paving the way for self- and partner-examination prior to entering collaborations. The reason for failing to realise synergies can thus also lie in the inability to manage synergy potentials properly and transfer them into synergy effects. In turn, this inability can arise from a lack of partnership managerial skills, conflicts that evolve while in a collaboration or that have not been adequately addressed at the outset of the partnership.

External causes can also lead to a deviation of the collaboration from the initially agreed track. Macro-economical shifts as well as statutory changes can influence the way partners perform and thus interact. In many cases, however, dissynergies evolve with the individual development of a partner and this is often due to the contractual details of partnership



agreements. They usually revolve around the mutual development of the collaboration, but do not embody contingencies concerning the evolution of individual members. To a certain extent partnership agreements might be flexible in nature and honour the individual maturation of allies, but all the effects of this development can still not be anticipated.

A temporal dimension of dissynergies supports the notion mentioned above that synergy potentials must be accomplished in a reasonable time span in order to create tangible synergy effects. Failing to achieve symmetrical synergies can also lead to negative collaborative effects. The equal realisation of benefits is an important prerequisite in achieving overall partnership synergies. While synergies can have varying relative importance for partners, their absolute attainment should be equal. This is because the threat of real and perceptive development of opportunism and predatory behaviour arises with asymmetrical synergies.

The term dissynergy thus entails conflicts that could not have been anticipated *ex ante* - thus were not part of the suitability assessment process - and that arise in the course of the partnership. In a more comprehensive definition, dissynergies can also develop from the delayed realisation of synergies.

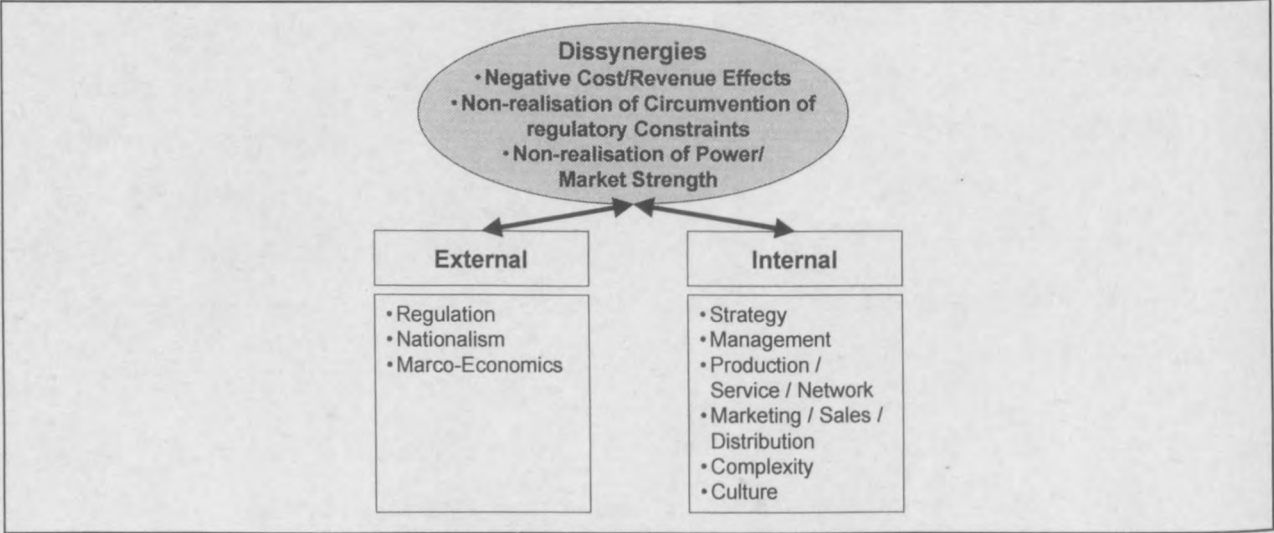
Essentially, dissynergies can partly be attributed to management failures also with regard to the development of a firm (internal) or negative influences on the realisation of synergy effects from the environment (external) (see Rodermann, 1999, pp. 208-209). Though there are guidelines in the form of partnership suitability evaluations for airlines to follow to help ensure a successful partnership, airlines encounter dissynergies both internally and externally. The division into internal and external dissynergies describes the position of these negative effects.

Generally, all individual synergy killers and dissynergies surface as a number of symptoms. In a first approach, these symptoms can be described as the inversion of the collaborative motivators mentioned above. They are consequently:

- Negative cost effects
- Negative revenue effects
- Non-realisation of circumvention of regulatory limitations
- Non-realisation of power and market strength

Figure 6.3 depicts a broad division into internal and external sources of dissynergies. A more detailed discussion, focussing on a typological conceptualisation of dissynergies in airline partnerships, follows in 6.3.1. and 6.3.2.

Figure 6.3: A Conceptualisation of Dissynergies



Source: own compilation

6.3.1 External Negative Effects

External negative effects can potentially evolve from all parties and circumstances that comprise the environment within which airline partnerships operate. Rapid business environmental changes may therefore lead organisations to alter their needs and business orientation, thus affecting their ongoing partnerships. New air transportation business models, such as the emergence of the low-cost sector, macro economic shifts like the trough experienced in 2001 and particularly after September 2001, and ongoing market regulation require individual carriers and partnerships to react in order to maintain a satisfying level of collaborative synergy. Consequently, political, social and economical arenas can determine dissynergies, alongside the previously described oppositions of strategic partnerships.

Externally influenced dissynergies include nationalism or protectionism displayed by a government which is concerned that the home carrier may lose control of valuable technology and market stature to a foreign partnering entity. These concerns are manifested in the bilateral regime based on the Chicago Convention of 1944,<sup>130</sup> and other regulatory hurdles that still impede airlines from freely competing. A country’s antitrust laws may also affect the formation of airline partnerships, prohibiting or restricting those transactions that are deemed

<sup>130</sup> See 2.3.1 and 2.5.4 for an intensive discussion and Doganis, 2001, p. 19, 196.



to be anti-competitive or monopolistic in nature. While most of these hurdles are foreseeable, airlines in existing partnerships are negatively affected by these constraints in their attempts to close further collaborative agreements.

The previously mentioned example of British Airways and American Airlines trying to receive immunity from antitrust laws, illustrates this precisely. Many broad interairline partnerships imply a priori that they will gain exemption from antitrust jurisdiction once they commence operation. In fact, their entire collaborative strategy, including network, passenger service, loyalty schemes, and branding, is based on this assumption. If, however, the expectation of operating in liberated market circumstances does not actualise, their collaboration is handicapped in the light of the initially agreed announcement. Tangible negative results can then basically originate from all four of the above-mentioned dissynergy sources.

National authorities and national jurisdiction are respectively responsible for another external impingement on airline partnerships. When national states wish to privatise their flag carriers, they create incentives for foreign airlines to engage in financial linkages. As the privatisation process is usually only to a limited extent within the control of the airline concerned, dissynergies may arise from these groupings for strategic partners. Therefore government policy might not necessarily agree with company strategy. The latter case terminated the partnership between KLM and Alitalia and illustrates this connection. While KLM was hoping for a quick privatisation of its strategic partner in order to establish a far-reaching collaboration, this confidence was undermined by the Italian government. As the privatisation process took longer than initially agreed, KLM discontinued its agreement with Alitalia due to the uneconomic time span within which to accomplish synergy effects. Thai Airways has encountered a similar dilemma. The Thai government has repeatedly proposed privatisation partners that are related to traditional political linkages between host governments. Air France was therefore mentioned as one of the investors. However, Air France is a member of the Skyteam alliance, which could have a counterproductive effect on Thai Airways' membership in the Star Alliance.

As a further external dissynergy category, airline partnerships might even create re-regulation and the establishment of competitive barriers. Where national or supra-national (e.g. EU) competition authorities feel that the establishment of an airline partnership can lead to anti-competitive groupings, directives can be imposed on the partnering airlines (see Shearman, 1992, p. 120). These directives can be to give up airport slots or other forms of compensations

to competitors. The case of the Lufthansa-Eurowings financial partnership in the German market exemplifies dissynergies developing from collaborations. Although, in this specific case, the negative effects of the competition authority's ruling have not fatally influenced the partnership, the effects were not anticipated by the collaborating parties.

When collaborative agreements exist between airlines originating from countries with dramatically different national or ethnic cultures, value and styles, external dissynergies can arise (see Perlmutter and Heenan, 1986, pp. 146-147 and for more on cultural dissynergy, see 6.3.2.6). The nature of these culturally-driven dissynergies can be diverse and range from negative brand perceptions to dissent regarding service features and quality standards. It is basically the market that might non-affirmatively assess the partnership and deprive it of the desired and imperative customer support. While partnering firms concentrate on gathering information and establishing policies in order to preclude cultural dissynergies, these conflicts appear to be inescapable for airline alliances.

Other environmental and infrastructure constraints might hinder the planned evolution of a partnership. Airport extensions or alterations, necessary, e.g., for the establishment of a partnership hub, alliance terminals or schemes to redress congestion, can be delayed or not take place at all. The same applies to important infrastructure such as airport slot allocation or an ATC service, which can slow down partnership expansion strategies.

Airlines find external conflicts hard to anticipate and control. Airlines are companies that still operate in legally constrained markets, but these companies are forced to engage in strategic action that goes beyond the legally, or bilaterally constrained limits. Information asymmetries between geographically separated and culturally distant carriers, as well as potential action from other groups residing in the airlines' environment increase the risk of external dissynergies. Airlines must thus be aware of these threats, be vigilant and attempt their utmost to anticipate them (see also Lorange and Roos, 1992, pp. 345-346).

### **6.3.2 Internal Dissynergies**

Equally important to external dissynergies are negative partnership effects that arise internally. Internal dissynergies are a more intensively discussed topic (see e.g. Harrigan, 1988, Fontanari, 1995, Goold and Campbell, 1998). This is mainly due to the fact that they primarily concern partnership managerial and organisational issues, which are evidently more directly controllable by the allies. In order to structure internal dissynergies, a classification into functional areas is subsequently introduced.



### 6.3.2.1 Strategy Dissynergies

Strategy dissynergies describe unanticipated predicaments emerging from the partnership's strategic orientation. Ideally, strategy dissynergies should not occur. If a partnership suitability process has intensively evaluated the partners' individual as well as the partnership's common strategic goals, substantial strategy asymmetries should not arise in situ. Allies should at least not turn out to be strategically incompatible during the course of the alliance. In the broadest sense, partnership objectives, particularly the partnership development and its financial benefits, should be congruent and not be set too broadly if unrealistic expectations are to be avoided (see Bleeke et al., 1992, p. 120). Airlines that are competitively forced to enter partnerships often lack a clear understanding of the real benefits to be expected from the collaboration, which makes it difficult to evaluate them. Ideally, agreements on the term of the partnership should be mutually reached and the partnership vision should be shared (see Bleeke and Ernst, 1991, p. 128 and Lindquist, 1996, p. 12).

Firms are dynamic structures, flexible organisms and always subject to changes, which occasionally lead allies to steer away from the partnership track. In addition, the aforementioned rashness to gain market access and the determination to be ahead of competition by means of collaborations, result in strategic dissynergies regularly materialising. Partners' positions within the partnership, their attitude towards the collaboration and their individual business intent often change. Airlines entering partnerships thus face considerable moral hazards, particularly because of the unpredictability of a partner's behaviour when this occurs (see Park and Ungson, 2001, p. 37). It is as a result of the associated dissynergies that, despite the rapid growth of both domestic and international airline partnerships, such collaborations are still considered risky. A partner may either have a free ride by limiting its contributions to an alliance, or simply behave opportunistically. Such concerns and the resulting dissynergies are further compounded by the unpredictable character of such relationships (see Gulati, 1998, p. 300).

The reasons for such behaviour can be diverse. A partner's strategies may initially need to be abandoned or changed in order to accommodate new partnership strategies (see Shearman, 1992, p. 120). However, this seemingly predictable, and thus resolvable, development can also appear in later stages of the partnership, due to movements in the composition of multilateral collaborations or because of externally induced changes in the overall partnership strategy. The example of Star Alliance members Thai Airways and Singapore Airlines (SIA) illustrates this connection. While Thai Airways was Star Alliance's only carrier with a strong

position in Southeast Asia, the entry of SIA into the airline network created unpredicted partnership strategy difficulties for Thai and ultimately for the entire network (see Flint, SIA's global Tilt, 2000). In this case, the overall strategic orientation of the multilateral partnership, which the individual members could only restrictively influence, lead to dissynergies within the collaboration. Cast in this context, the possibility of intra-partnership rivalry becomes evident. With SIA and Thai Airways having been strong competitors prior to the partnership, the Star Alliance membership has not helped to alleviate the situation.

The complex of strategic dissynergies with regards to partnership composition is also related to exclusivity expectations or competitive considerations that develop in multilateral webs of partnerships. With an abundance of carriers engaging intensively in a growing number of partnerships, the possibility of overlapping multilateral partnerships is evident. While single carriers are usually contractually barred from being member of more than one multilateral strategic partnership, less strategic links between discrete members of networks or individual airlines are possible and common. British Airways (Oneworld) and KLM (Wings), for example, have codeshare agreements on routes from Europe to the Middle East. This link might be beneficial for the two carriers, but may cause friction or dissatisfaction among the remaining partners in the respective alliance networks.

The alliance between SIA and Virgin Atlantic Airways gives SIA a back door to the domestic Australian market with Virgin's subsidiary Virgin Blue operating as an Australian low-cost carrier. However, their partnership could potentially cause problems with Ansett Australia and Air New Zealand, which both operate in the domestic Australian market but are members of the Star Alliance, a rival of Virgin Blue. The same will occur once SIA gets traffic rights to start services from the UK to the US. SIA will be in direct competition with United Airlines, another Star Alliance member. Other carriers are virtually pivots for the partnership action of various groups. SAA, for example, used to codeshare to Europe with Lufthansa (Star Alliance) and Swissair (Qualiflyer). Its routes to the USA are supported by a codeshare agreement with Delta (Skyteam). SAA thus concentrates individual networks' demands, which can trigger negative effects on the individual operations. Thus individual strategic partnership action always needs to be weighed against group-inherent exclusivity considerations to avoid dissatisfaction and dissynergies.

In the worst case, dissynergies can turn an ally into an opponent. A strategic shift from social to opportunistic behaviour motivated Austrian Airlines to abandon the Qualiflyer Group. Austrian's decision to leave Qualiflyer was partly caused by its shareholder and strategic ally,



Swissair Group's attempt at a share increase. Swissair Group already held 10% of Austrian Airlines, but an increase in that stake was formally precluded. Swissair Group, however, tried to acquire an additional 9% stake held by All Nippon Airways (ANA) without informing its long-term partner. This strategic re-orientation led to substantial friction in the partnership and ultimately to its dissolution.

It becomes apparent that with volatile air transport markets on the one hand and comparatively loose airline collaborations on the other, strategic dissynergies are often unavoidable. These dissynergies might not necessarily manifest themselves in reneging on partnership agreements, but in individually deviating slightly from a strategic path that heralds benefits for the entire multilateral grouping.

#### **6.3.2.2 Management Dissynergies**

Management dissynergies describe negative partnership effects that develop from governmental structures and managerial activities within collaborations (for managerial synergy biases, see Goold and Campbell, 1998). The reasons for management dissynergies can be diverse, as their definition indicates. However, three main management dissynergy areas are definable.

- Government structure dissynergies
- Conflict resolution dissynergies
- Corporate style dissynergies

The inherent organisational volatility, changes in organisational theory and hierarchical configurations, and the overall composition of especially multilateral partnerships, potentially host dissynergies. These dissynergies can lie in lost managerial potential through redundancies, lengthy decision taking, inflexible processes, loss of dynamism and obviously in tangible conflicts (see also Lorange and Roos, 1992, p. 345 and Raffée and Eisele, 1994, p. 19). Consequently, initially planned managerial synergies do not materialise. In the worst case, intra-partnership managerial tasks are inadvertently made more strenuous.

Dissynergies from government structures are spurred by the inability to relinquish managerial authority and thus economic independence (for inter-business dissynergies, see Goold and Campbell, 2000, p. 86). Incumbent carriers regularly lack the disposition to withhold themselves from managerial duties in a partnership. Joint managerial structures imply that resources are shared and that partners gain - limited - user rights over these resources (see

Lorange and Roos, 1992, p. 344). However, when gaining access to new resources, partners also have to abandon some of their independence. This context is a key presupposition for collaborative action. Violation of resource sharing and opposition to the loss of independence associated with it can lead to dissynergies.

In asymmetrically configured collaborations, the set-up of partnership management structures can lead to substantial negative results for smaller carriers. While the larger partner can accommodate larger collaboration management structures and easily assign more staff, smaller airlines might not necessarily be able to do so without having to sacrifice resources elsewhere. Especially franchise partnerships that incumbent carriers (e.g. British Airways) establish with smaller regional airlines can impose significant managerial challenges on the junior franchisee. As managerial resources have to be dedicated to the set-up of predefined management structures, focus on the daily business, the external environment and the strategic advancement can be lost. The effect can be negative for all parties as the overall result from the joint business might not be as expected or agreed.

Qualitative and quantitative differences in resources invested in the establishment of adequate partner management structures can enhance power imbalances (see also Bucklin and Sengupta, 1993, p. 36). In turn, the presence of power asymmetries in exchange relationships creates the potential for dissynergies. The expectation that organisations with superior power will appropriately exploit that power is the essence of the issue. If dependencies are out of balance in a relationship, the weaker party will take precautions to limit its vulnerability. In the context of dissynergies, this effort could take the form of competing airlines within a partnership, subtle efforts to diminish the role of its partner with customers, or failure to employ all of the collaborative resources required. Recognising the potential for this behaviour, the more powerful party may similarly be loath to put forth the maximum effort required by the collaboration project (see Bucklin and Sengupta, 1993, p. 34). This is mainly the reason why larger multilateral partnerships give their smaller partners equal voting rights and managerial representation.

Dissynergies originating from a lack of conflict resolution are an overall negative effect, and thus very important. The inability to resolve ubiquitous conflicts in partnerships through appropriate structures and mindset is seen as one of the most critical factors leading to failure. Dissynergy through managerial frictions presents itself once the resolution of conflict requires an excess of managerial resources and/or the commitment of top management (see Shearman, 1992, p. 120). The occurrence as well as the laborious resolution of conflicts is frequently



associated with a lack of trust (see 5.6.1 for trust in partnerships and Goold and Campbell, 2000, pp. 87-88).

Once relationships have been impaired due to breaches of trust, the resolution of conflict becomes even more of an obstacle. Airline partnership management occasionally acknowledges these risks on head-office level by setting up adequate resolution mechanisms, processes that support conflict resolution and personnel in charge of investigating conflicts. However, processes with which to work through disharmonies on a station level are often neglected. This is especially true of codeshare partnerships or other geographically confined marketing agreements that likely create conflicts. Since these conflicts often arise from passenger complaints and operational issues, they need to be addressed where they occur - namely on the station level. Conflict resolution must thus be made universally significant, at all hierarchy levels, in order to avoid dissynergies from failed or lagging problem-solving processes.

Corporate style dissynergies can arise notwithstanding appropriate partnership management structures (see Shearman, 1992, p. 120). External collaboration management serves as an interface between the partners and is consequently the junction where corporate management styles converge. If these styles are not in some way compatible, if the chemistry between the collaborating managers does not exist, and if these frailties result in friction and delays in the joint partnership management, then dissynergies arise (see Gulati, 1998, p. 300). While external collaboration management structures offer a formal basis for managerial partner transactions, they can, however, only very restrainedly address the way in which managerial tasks are dealt with inside a partner's organisation. A culture of secrecy, domineering staff and mistrust towards the alliance undermines co-operation (see Weipert, 1993, pp. 233-234). Different approaches to prioritising issues that need to be addressed are also seen as a factor in corporate style dissynergies (see Lindquist, 1996, p. 12). While one carrier might highly value FFP partnership issues, its collaborating partner could prioritise technical matters. These matters must be given equal priority in the partnership management process to ward off dissynergies. Corporate style issues are a particular driver for management dissynergies, they are, however, embedded in the corporate culture sphere, which is described below (see 6.3.2.6).

Appropriate partnership management structures, both internally and externally, should be created in a way to avoid dissynergies (see 5.5 for partnership management and for an empirical study, see Dyer et al., 2001, p. 38). The main elements of successful dissynergy-

avoiding management structures are suitable representation of partnership members,<sup>131</sup> the inclusion of all, relevant partnership tasks and functions, and sensitive conflict resolution mechanisms. Nevertheless, what was planned to be an optimal governance solution at the outset of the partnership might not necessarily prove to be beneficial in the course of the collaboration.

### 6.3.2.3 Production, Service and Network Dissynergies

While the production process of an air transport service might not necessarily create friction among collaborating partners, it is the qualitative results of this process that can possibly lead to disenchantment within a partnership (see Lindquist, 1996, p. 12).

Differences in customer expectations and perceptions on codeshare operations are a primal source of concern in airline partnerships. Differing products and onboard service standards can lead to substantial customer dissatisfaction, and consequently dilute positive partnership effects. Some examples above have described the negative results of inconsistent service levels within an alliance.<sup>132</sup> These examples nevertheless visualise the lack of partnership planning and suitability evaluation. Service level differences that can be anticipated *ex ante*, should not persist into the operating phase of a partnership. Dissynergies of this kind are avoidable if partners have been thoroughly scanned prior to contractually engaging in the collaboration.

Dissynergies in the course of a partnership can, however, arise from the unilateral development of a carrier. In respect of service standards, it is perceivable that a partner could individually change its onboard service philosophy while in collaboration with another carrier. Possible service modification that can lead to drastic consequences for the partnership are, e.g., the abandonment of a 3-class system or the termination of the serving of alcoholic drinks on flights. The results of these unilateral service standard variances surface once the passengers feel deceived or merely distressed by service inconsistencies within a partnership. An upward development, however, might also occur. An airline could increase its passengers' comfort by offering, e.g., highly sophisticated entertainment and communication services, or more comfortable seating configurations. This action might be to the partnering carrier's

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<sup>131</sup> E.g., external partnership management structures (Star Alliance) or mutual board representation (e.g., KLM/Northwest).

<sup>132</sup> See the example of the parallel codeshare agreement between SAA and Cathay Pacific, and Delta Air Lines and Korean Air Lines above (see Merrill Lynch, Pierce, Fenner & Smith Inc., 1999, p. 3).



detriment as consumer expectations and preferences can develop unevenly in the collaboration due to the superior service offers.

Other service related dissynergies arise with unsymmetrical treatment in the provision of services to partners. A reason for the break-up of the long standing codeshare partnership between SAA and American Airlines (AA) was that AA charged SAA frequent flier fees that were several times higher than those it charged other partners (see Feldman, 2000, *Alliance Costs Start Building*, p. 48). In this case, the reciprocal FFP acceptance was more expensive for SAA passengers flying on AA.<sup>133</sup> While these negative effects with immediate financial implications for SAA were not present at the outset of the partnership, they nevertheless developed in the course of the alliance. More negative effects arising from inter-partnership service provision or service standards can develop from an abandonment of preferential passenger treatment, e.g. not admitting partners' passengers to lounges or not accepting FFP statuses.

Dissynergies can also evolve with network structures. Airlines joining forces either bring complementary or overlapping networks to the partnership. Both constellation are feasible in certain partnership configurations and strategic orientations, and should be scrutinised in the partnership suitability process ahead of time. Network structures, however, foster potential dissynergies. These negative effects mainly evolve with individual partner developments concerning network extensions by engaging in other partnerships (see 6.3.2.1 for strategy dissynergies). Partners opportunistically advancing their own networks, either via hubs or feeder services, enter in competition with a partner's individual network or with an overall multilateral network structure. American Airlines, in its partnership with SAA, undermined the overall Oneworld network structure. AA's partner British Airways aimed at offering attractive connections from South Africa to the USA via its London Heathrow hub. AA conversely offered direct services to the USA through its codeshare with SAA.

#### **6.3.2.4 Marketing, Sales and Distribution Dissynergies**

Selected negative effects developing from airline collaboration in the marketing, sales and distribution sphere have been previously described. Once more, partner suitability evaluation should ideally detect strengths and weaknesses in these functional areas prior to engaging in partnership action. If necessary and practicable, the evaluation should activate a process of

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<sup>133</sup> The common system of FFP benefit allocation denotes that for a partner airline A's passenger, using A's FFP system but flying on B and requesting B's FFP bonuses, B charges A for the miles credited.

redressing these weaknesses. Negative effects - dissynergies - mostly originate from the disadvantageous evolution of a partnership or non-perceivable factors arising in the course of establishing alliance marketing, sales and distribution organisations.

One of the greatest concerns expressed with regard to the close co-operation of carriers is the possible weakening of the brand and the heritage of partner airlines (see Howarth and Kirsebom, 2000, pp. 42-43). The standing of key partners in a multilateral partnership can have an especially influencing effect on the overall brand status. Swissair's economic troubles at the beginning of 2001 had a strong impact on the brand perception of the entire Qualiflyer Group of carriers, which thereafter started to disintegrate. The same usually happens following accidents or other events of high prominence. Air France's Concorde crash in 2000 ignited a discussion on the French national carrier's safety standards and the technical reliability of the Concord equipment. This event has most probably affected its ally Delta Air Lines as well. In collaborations, the image of one of the partners may be damaged when customers have the perception that the lower quality or technical deficiency of the second carrier prevails throughout the partnership (see Shearman, 1992, p.120). These events are impossible to anticipate, but can lead to drastic effects on the wellbeing of a partnership.

Marketing messages can have a similar negative effect on the partnership. As individual carriers or multilateral groups usually associate themselves with the collaboration by graphically linking their own brand to the partnership, a negative image transfer is conceivable. When South Africa's Comair became a franchise partner of British Airways, one of the main concerns of Comair's management was the possible negative image effect of the collaboration. While Comair was previously a well-established South African carrier, the brand link to BA was anxiously anticipated. For some South Africans, BA's corporate image and culture represented associations with colonialism and stiffness. Aversion against a new franchisee due to image consideration has never been empirically proven, the example, however, shows the potentiality of image associations.

Sales and distribution, especially personal sales, drive dissynergies. In many cases, these dissynergies are less of a systematic and IT nature, but more of a people matter. Lack of commitment and support for a partnering carrier in the joint sales process is an issue that needs to be seriously considered by airlines entering and operating a partnership. Adequate measures need to be taken to avoid negative, tangible and intangible effects on the individual partners and the overall partnership by opportunistic and/or destructive behaviour in sales.



For both, marketing and sales, it is argued that agreements on integrating strategies and tactics may prove to be very difficult and time-consuming. In most instances it is the individual airline's self-image that forms an obstacle to the conclusion of common business approaches. On the other hand, long-standing and successful business philosophies are less likely to be changed. A prudent, yet comprehensive approach in analysing, conceptualising and ultimately implementing these joint systems in order to avoid the occurrence of dissynergies thus needs to be established.

#### **6.3.2.5 Complexity-induced Dissynergies**

Many researchers have testified to the complexities associated with the interdependence of activities across members in strategic partnerships (see Hamel et al., 1989, Park and Ungson, 2001). In this context, complexity is an issue regularly alluded to regarding collaborative challenges and negative partnership effects.

Complexity per se does not necessarily incorporate dissynergy. As virtually every partnership business transaction is associated with complexity to a greater or lesser extent, the resolution of complex interrelationships is a fundamental task of partnership management. However, a certain degree of complexity can be a destabilising force in a partnership, once it cannot be dealt with. The mastery of complexity should thus receive significant managerial attention and this discipline is argued to be inseparable from synergy considerations (see Rhumbler, 1993, p. 24). There is no doubt that the larger the companies and the more intensive they are in terms of width and depth collaborations, the more complex formation, integration and governance of the joint business becomes. Huge operations may even cannibalise positive partnership effects by their mere size and by the complexities associated with internally administering partnership issues.

In defining and evaluating complexity, the costs of partnership activities play an important role. Co-ordination costs mirror the anticipated and experienced organisational complexity of distributing tasks among partners together with the ongoing co-ordination of activities to be completed jointly or individually across organisational boundaries (see Gulati and Singh, 1998, p. 782, Osegowitsch, 2001, p. 18). Costs of co-ordination can thus be an index that potentially visualises the negative effects that evolve with complexity. In this context, it is prudent that the gains of the partnership may be questioned once the costs of co-ordinating the partnership action have superseded the synergy potentials or diluted the synergy effects. Equally important in materialisation, but more difficult to quantify, are intangible

complexities. These can lie in the interpersonal and cultural areas of collaborations where complicated transactions can have non-affirmative effects on synergy.

Yet complexity should and can be anticipated. In 2000, British Airways and KLM discontinued their merger talks at a sufficiently early stage, due to the complexity of the venture, particularly in the light of the restraining legal and regulatory environment of airline consolidation in Europe. In 2001, the Star Alliance development came to a halt as far as the admission of additional global partners was concerned. The reasons provided were considerations weighing the incremental benefits of more partners against the increasing complexity of and inhibiting effects on the multilateral partnership. It is obvious that a web of 15 independent core members harbours extremely complicated and laborious processes in the finding of consensus. Star Alliance still wants to grow, but the managerial systems and procedures addressing the complexity of governing and advancing the partnership in its current size, require refinement prior to admitting new partners.

While these examples display prudent approaches, other carriers might find themselves in what was earlier described as the synergy trap. With little or no consideration of the calibre of complexity to be expected from partnership action, airlines almost blindly enter collaborations. This was the case in the web of main linkages that the Swissair Group established in the air transport industry until the year 2000. Given the cultural diversity of its airline equity partners, their geographical dispersion and strategic orientation, complexity proliferated and impeded the subsequent advancement of the partnership.

Specific complexity concerns related to larger airline partnerships and leading to a negation of collaborative benefits have been empirically proven: These are (see Howarth and Kirsebom 2000, p. 42):

- Increasingly complex and difficult mechanisms of governance and specifically the basis of agreeing on the division of contributions to joint air transport operations.
- Complex operational problems - transfer passengers, baggage, service recovery, customer enquiries, and others. Large infrastructure co-ordination costs and complexities are likely to be incurred.
- Escalating training and communications costs due to the scope and intensity of the partnership or to the increasingly complex demands of these areas.
- Growing comparability arguments in staff relations and pay negotiations, consequently increasing the complications of addressing and redressing these issues.



- Short-term increases in the (co-ordination) cost of the sales and distribution process as complexity precedes consolidation.

Some issues of complexity need to be considered with reference to dissynergies. While partnership intensity increases, so does collaborative synergy potential and consequently the possibility of dissynergy induced by complexity. Airlines seem to be lacking aptitude to honour this relationship and to adequately address the problems associated with it. Coming from a background that has traditionally been characterised by oligopolistic structures and rather loose connections between partner carriers, the ability to tackle complexity in closer collaborations seems to be non-existent or in very nascent stages. The example of the once very close and subsequently untied and restructured relationship between KLM and Northwest Airlines (see Tully, 1996) has shown the lack of knowledge to successfully operate a close airline linkage by tackling complexity-induced dissynergies. Managerial skills to meet the challenges of collaborative complexity are, however, salient, not just with regard to the current phase of interairline partnerships, but in particular in the context of the expected consolidation in the airline industry.

#### **6.3.2.6 Cultural Dissynergies**

The cultural dimension of business partnerships has received thorough scholarly attention (see e.g. Perlmutter and Heenan, 1986, p. 146, Lewis, 1990, pp. 253-279, Bleicher, 1992, pp. 281-285, Lorange and Roos, 1992, p. 353, Schmidt, 1993, p. 79, Ensign, 1998, p. 665, Park and Ungson, 2001 and 5.3.2.3 for cultural fitness). Most studies depict the cultural (business and ethnic) challenges associated with linkage building, and possible negative effects from cultural diversity on partnership action (see Bittner, 1996). In some research, cultural differences are deduced to be a source of conflict, which can consequently result in partnership dissynergies (see e.g. Schmidt, 1993, p. 79, Raffée and Eisele, 1994, p. 19).

It has previously been stated and empirically proven that similarity of cultural values may reduce misunderstanding between the partners and propagate thriving partnerships. Conversely, culturally distant partners experience greater difficulty in their interactions and cultural dissimilarities enhance the risk of failing in a collaboration (see Raffée and Eisele, 1994, p. 19). The cultural challenge is further intensified by the scope and intensity of interaction, since more intense partnerships display a larger frontage for cultural clashes (see Lewis, 1990, p. 260). Cultural compatibility between partners is one of the most important factors in the survival of a collaboration, because the defects in partnerships often stem from

the unobtrusive influence of culture, in its different spheres, on behaviour and management systems, which may create unresolved conflicts (see Park and Ungson, 2001, p. 44).

The main spheres of cultural dissynergies are seen in the incompatibility of partners' cultures and the contrariety of a company's overall development philosophy and its own culture (see Raffée and Eisele, 1994, p. 19). The first aspect represents the classic view of cultural dissimilarities, driven by misfits of the collaborating firms' individual cultural orientation. The latter, however, is a more internal view of the company's general cultural aptitude to engage in partnerships. While most studies are concerned with *ex post* views of cultural dissimilarities, individual cultural fitness for partnership action considerations combats cultural dissynergies that primarily lie within one of the partners and from an *ex ante* perspective.

In the light of the strategic decisions to be made, individual cultural fitness and a critical cultural self-evaluation are important to elude culturally motivated dissynergies. A carrier's management might be enthusiastic to expand the operation by means of strategic partnerships, but the company's own culture might not be supportive of this kind of strategic action. Swissair's strong national and quality-driven culture did not value the parent's expansion strategy with second-tier European carriers; initially the collaborations with TAP Air Portugal and Sabena of Belgium lacked staff support. It has repeatedly been argued that especially staff's reluctance to sustain collaboration strategies is a symptom of internally cultural unfit carriers (see also Weipert, 1993, pp. 232-233). A decision whether or not to collaborate should initially be based on a comprehensive evaluation of the individual culture and, possibly, a transformation through training and awareness campaigns. Southwest Airlines, for example, has a strong corporate culture, which is widely acknowledged to be incompatible with any other North American carrier with which the airline could theoretically co-operate.

Once compatibility of the individual corporate culture and the corporate strategic intent has been achieved, cultural dissynergies can emanate from the mismatch of the partners' cultures *in situ*. The external management organisation of strategic airline partnerships usually includes managers from different carriers with different national, ethnic cultural, social, political and economic backgrounds. As far as the abundant cross-border airline partnerships are concerned, the social context in which they operate is partly defined by the cultural and institutional background of the nationalities that the partners represent. National culture then affects managerial behaviour and moderates the relationship between the structural and economic variables and partnership performance.



Since different corporate cultures come together in business partnerships, it is imperative that management considers these differences, understands how these cultures interact and knows how to redress problems that arise. The following general reactions are perceivable when different cultures encounter one another (see Schmidt, 1993, p. 79):

- Pluralism: The distinct cultures stay separate
- Assimilation: Business cultures slowly merge to form one culture
- Take-over: One partner sacrifices its own culture in favour of a partner's culture
- Resistance: Business cultures turn out to be incompatible

Dissynergies are perceivable in all of the aforementioned intercultural reactions. While assimilation and take-over suggest that they occur with little cultural friction, this has to be regarded with certain scepticism. Assimilation might fail, since separate firms' long-established cultures cannot easily be meshed to incorporate a new common culture. Cultural take over often occurs in differently sized firm linkages. Potentially, however, the culturally integrated firm might repel the new culture, which certainly leads to friction. Pluralism and resistance are prone to critical negative effects from cultural dissimilarities. Both dissynergies lie in the failure to properly integrate organisational cultures from the senior management level down to the front line. Partners from different and unrelated national cultures tend to experience a lack of fit in organisational and strategic practices, making co-ordination more difficult. A lack of partners' cultural suitability could also lead to poor communication and mutual distrust. Negative effects manifest in less efficient alliance performance as well as in insecurity and dissatisfaction of staff. A further symptom is increased staff fluctuation on all hierarchy levels, leading to decreased performance.

For proposed capital linkages or mergers, the culture issue becomes even more of a strategic success factor. This is why some advanced carriers pay more attention to leadership and other human capital and cultural elements. The merger between Air Canada and Canadian Airlines was preceded by a comprehensive assessment of Canadian Airlines' officer corps. Consolidation strategies touching the cultural sphere of the human element can include a culture due diligence on pre-merger human capital evaluation, post-merger integration, leadership talent benchmarking and succession planning (see Bell, 2000, p. 106). In some instances, historical airline mergers would not have made progress had the acquirers taken adequate stock of the culture's chief elements (for Swissair's failed integration strategy see Buerkle and Smith, 2002).

Soft as well as hard and tangible factors arise with cultural dissynergies. Additional costs incurred by having to co-ordinate cultural issues and lost revenue as a result of friction in processes and among staff members largely contribute to negative financial effects. Although many culturally induced dissynergies are not quantifiable, they are equally important. Business traits and habits that are uncommon to partners, difficult to understand and to deal with, can cause delays in decision making and slow down daily business. As these effects are not necessarily quantifiable, they often remain concealed and are thus excluded from formalised resolution.

Internal and external evaluation processes provide some measure of risk mitigation, preparing the prospective partners for what lies ahead culturally. The overall objective therewith is to lessen the risks to the wellbeing of the partnership from inherently different corporate cultures, while also appreciating the challenges, the developmental and creative potential of bringing cultures together in interairline partnerships.

#### **6.4 Partnership Intensity - a Determinant for Collaborative Synergy**

Partnership intensity has repeatedly been referred to in connection with the possible benefits of synergy<sup>134</sup> (see Khanna, 1998, p. 340). It was also proposed that partnership intensity forms part of the arenas of synergy, and is thus one of synergy's influencing drivers. This connection is now scrutinised further, placing partnership intensity and synergy in a more detailed causal relationship.

Partnership intensity is defined as the extent of direct involvement between business partners. This involvement is determined by the size of assets and resources (soft-, hardware, and personnel) invested in establishing and maintaining the partnership (see Zinn and Parasuraman, 1997, p. 140 and Khanna, 1998, p. 344). A further constituent of partnership intensity is seen in the frequency of interaction and the planned duration of the partnership (see Lutz, 1993, pp. 54-55 and Parkhe, 1993, pp. 800-801). Frequent interaction does not only mean to regularly engage in economic transactions, but also implies the importance of jointly deciding on further strategic moves to benefit the partnership's development. Intensive involvement in collaborative action also suggests that the partnership is not easily dissolvable. In contrast, low intensity partnerships are characterised by the possibility of unconstrained

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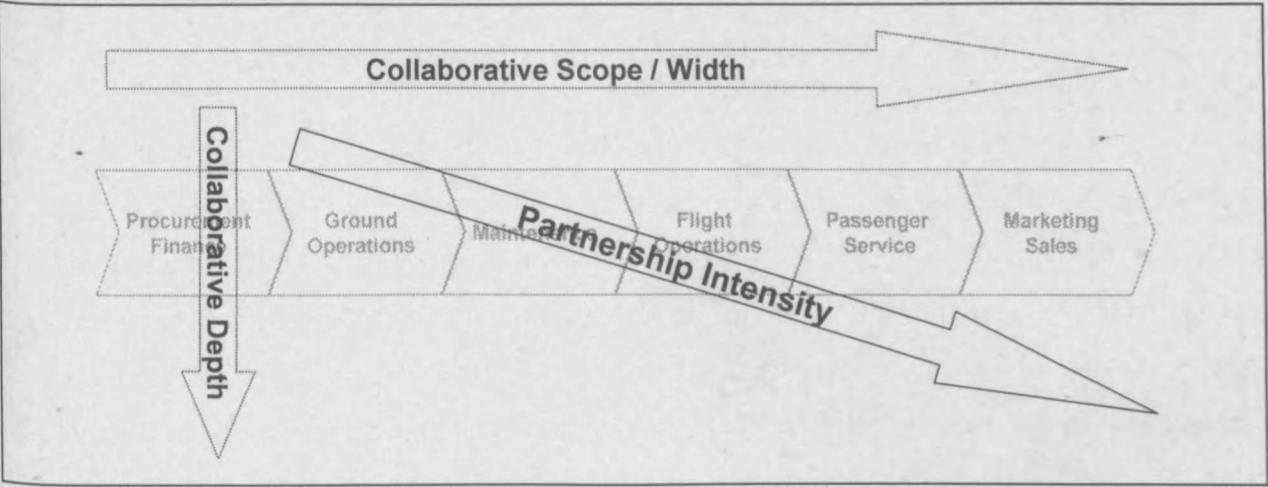
<sup>134</sup> For a quantification of cost benefits determined by the intensity of the partnership, see further above in the section on cost motivators to collaborate (4.3.2.1)



separation and the probability of a facile partner replacement with a suitable substitute (see Zinn and Parasuraman, 1997, p. 141).

Therefore, partnership intensity is concerned with both, the reach or scope and the depth of collaborative agreements, as visualised by figure 6.4. Considering the value chain, airlines might collaborate in almost the entire value creation process and consequently engage in widely-oriented partnership activities.<sup>135</sup> In turn, collaboration might be limited to very few selected parts of the value chain, e.g. maintenance collaboration, which would then signify a narrow partnership. However, narrow partnerships can be profound in their particular collaboration area. A maintenance alliance can show significant depth if the participating carriers, e.g., jointly develop, uphold and refine maintenance systems. Partnership intensity should thus be understood in a two-dimensional context describing the resultant of the horizontal (width) and vertical (depth) partnership orientation along the value chain.

Figure 6.4: Intensity-determining Two-dimensional Collaboration Context



Source: own compilation based on Diegruber, 1991, p. 241

6.4.1 A Relational Devolution of Partnership Intensity and Synergy

Airlines’ collaboration strategies centre on improving their competitive position and increasing shareholder wealth by means of inter-company synergies. The intensity of their collaboration thus determines the potentiality of synergy effects. Obviously, not every airline wishes or can engage in proximate partnerships. In deciding on whether or not to collaborate intensively, airlines are firstly restrained by the legal and regulatory environment in which they operate. Secondly, the decision regarding the intensity level of the partnership is based

<sup>135</sup> By definition, collaborations cannot entail partnerships spanning the entire value chain of the allies.

on individual synergy potential considerations, which are founded on collaborative motivators and thus embedded in the firm's strategy (see Khanna, 1998, p. 344).

If high intensity relationships embody greater levels of resources committed to the relationship, it follows that more intense linkages might produce higher levels of output. It is thus plausible that the less intense a partnership is, the fewer the overall, absolute synergies that are achievable. Nevertheless, this does not imply that only intensive collaboration is necessarily required. Broad synergy potential cannot be desired at all times nor is it expected. If an airline wishes to enter a specific market, e.g. through unilateral codesharing and a sales agreement, then the synergies of this specific strategic partnership move should ideally materialise. The initial synergy potential in this case has a very limited, narrow scope and it primarily lies in extending the airline's network to a discrete geographic region and in brand awareness considerations. If these limited synergy criteria regarding sources, arenas, motivations and areas of synergies can be symmetrically translated into tangible synergy effects, the partnership strategy is a success.

Limited interairline collaboration can thus be beneficial despite its confined reach. The question is how significant this one collaboration is for the participating airline and its corporate performance. This significance is mainly determined by the qualitative and quantitative value of the collaboration vis-à-vis the airline's general economic condition and developmental orientation. Lufthansa, for example, undoubtedly benefits from codeshare services with its regional Lufthansa Team partner Cirrus Airlines<sup>136</sup> to economically viable, although less frequented destinations in Germany and the neighbouring region. In relative terms, compared to Lufthansa's passenger air transport operation and with reference to its other partnerships, this joint business is economically of marginal significance. Cirrus Airlines, on the other hand, depends completely on this partnership, as its entire asset structure is dedicated to permanently providing connections and feed for Lufthansa. Relative to the participants' businesses, synergies can thus drastically differ. From an absolute perspective, however, the achieved synergies on both sides can be equally high.<sup>137</sup>

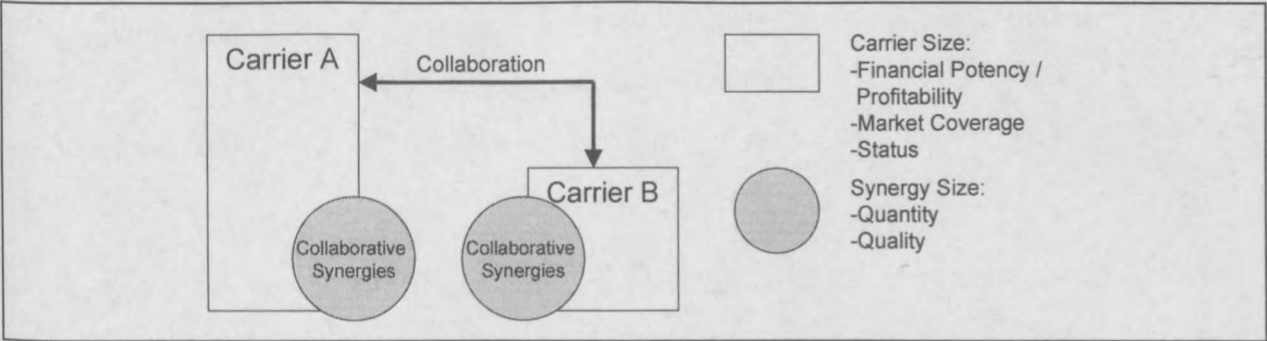
The following, simplified graphical juxtaposition of absolute synergy size and carrier size allows for a delineation of the weight of synergies for differently sized partners.

<sup>136</sup> Cirrus Airlines operates 5 regional aircraft and supplements Lufthansa's network out of Saarbrücken in the western part of Germany.

<sup>137</sup> This presupposes that the partnership action strives to fulfil the same goals and that opportunistic behaviour and unbalanced contribution can be avoided.



Figure 6.5: Synergy Size vs. Carrier Size



Source: own compilation

For carriers that do not differ that drastically in size and operate in a multilateral partnership environment, synergies have a separate character. Lufthansa’s linkage to, e.g., Ansett Australia has a more strategic meaning, given the background of the common Star Alliance membership. Despite the carriers being joined under the Star Alliance umbrella, they are far from being profound partners. The premier motivation for admitting Ansett was to provide the entire Star Alliance group with access to the Australian market and to feed traffic from Australia and the region into the Star network. Individual partnership motives were of secondary importance, the group-based synergies in this case outweighing the company-based benefits of the agreement. The collaboration with United Airlines, Lufthansa’s ally, especially in the North American and transatlantic markets, is of the highest importance for both carriers. This is only partly due to the common Star membership of which the two are founding partners, but is ascribable to the close, comprehensive and competitively important relationship. What is even more salient in their affiliation is that in the USA they operate under antitrust immunity in an open skies agreement. As the main pillars of the Star Alliance, their strong presence in two of the main air traffic markets, as well as their size and status, make them the main drivers of the evolution and the generation of collaborative benefits and the subsequent advancement of the multilateral partnership.

As far as synergies are concerned, the examples of Lufthansa’s partners show that for different scopes and depths of collaborative activities, synergies lie on divergent corporate or multilateral group significance levels. Synergies for narrow collaborations can be adequately effectuated, the realisation of synergy potentials provided. However, the efficacy of these on the company’s performance as a whole depends on the significance of the synergies in relation to the size of the respective firm or collaborating business. Figure 6.5 graphically illustrates that the extent of positive effects from collaboration almost equals the size of small carrier B. The resulting synergies from the collaboration with carrier A, consequently describe

the importance for carrier B's operation, but also visualise the dependence on collaborative synergies. Synergies have a lower relative effect on carrier A, which is not surprising considering A's size. However, absolutely, the partnership itself is likely to produce maximum synergy if the potential of the intensity level is fully exploited and synergies occur evenly.

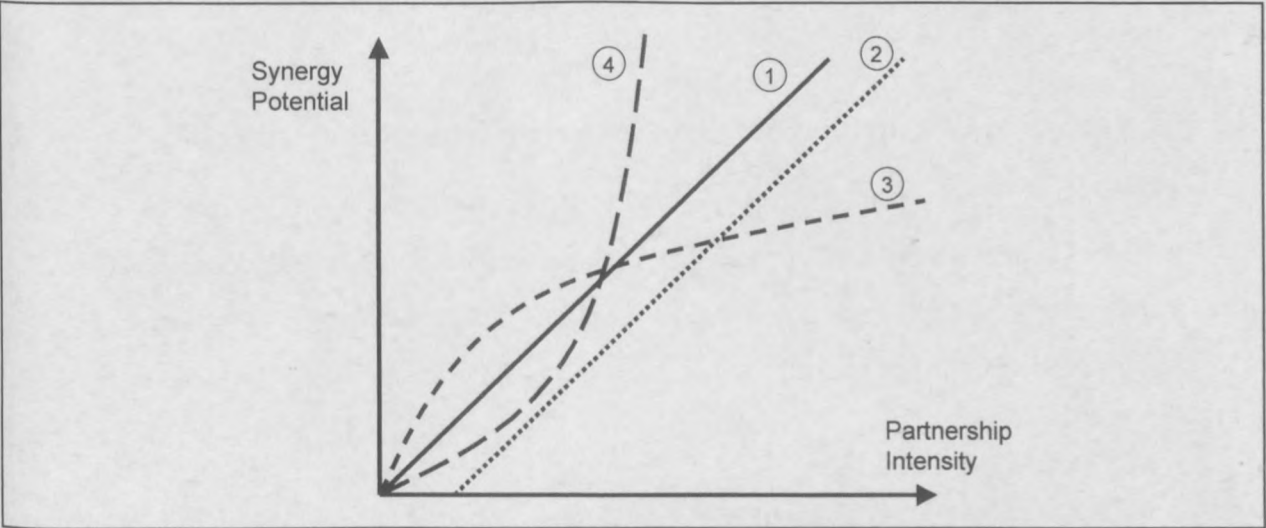
Multilateral partnerships or carrier networks, currently the most profound form of horizontal multi-carrier alliances, can produce different synergy levels among their members. In a partnership that is mainly driven by joint membership in a multilateral grouping, thus serving group interests, synergies are of varying momentum to the individual carriers. As the airlines primarily partner via the multilateral group, the relationship is further and synergies normally less immediate (see e.g. Ansett - Lufthansa). In close relationships of equally sized carriers with related strategic intents, synergies have a similar absolute and relative importance and the development of the partnership can jointly be given impetus (see e.g. United Airlines - Lufthansa).

The absolute synergy efficacy does not depend on merely the scope nor purely on the depth of the collaboration, but its intensity, which describes the resultant of the two (see figure 6.5). Synergy can thus be defined as the function of partnership intensity, with the absolute synergy result having a direct relation to the closeness of the collaboration.

In a graphic presentation, the position of the intensity/synergy potential function's graph can thus vary in the system of co-ordinates. As no empirically founded and universally applicable data on the relation of partnership intensity and synergy are available, the following positions and courses are considered hypothetically possible. As one of many functions, the system of co-ordinates only shows a few, but significant possibilities. Since the graphs describe synergies that are possibly achievable, they are obviously concerned with synergy potentials.



Figure 6.6: Graphic Presentation of the Relationships Between Partnership Intensity and Synergy



Source: own figure

- No. 1 puts partnership intensity and synergy potential in a linear relationship. The course delineates that with each increase in partnership intensity, an equally high increase in synergy potential is to be expected.
- No. 2 also puts partnership intensity and synergy in a linear relationship, but reveals that synergies only start to evolve once a certain stage of partnership intensity has been reached or a critical intensity threshold has been passed. This relationship, e.g., would occur in the case of an airline IT collaboration if the benefits from partnering can only be achieved once both parties have fully integrated a common IT system or infrastructure.<sup>138</sup>
- No. 3 describes a radical-shaped relationship function with a degressive gradient. After a growth phase in the partnership intensity/synergy function, a virtual synergy threshold value will be reached. This shape applies to collaborations that are limited to certain functions and which, after a phase of synergy exploitation through intensity enhancement, cannot grow any further.
- No. 4 puts partnership intensity and synergy in a seemingly exponential relationship with a progressive growth, where an increase in intensity results in a disproportionally high growth in synergy. The exponential growth in synergy can be attributed to positive effects such as synergy spillover and effects on other areas, or the subsequent advancement or creative development of further positive effects.<sup>139</sup>

<sup>138</sup> Airline partnerships that seem to generally require a critical scope of collaborative activities for gainful partnership effects to evolve have been previously discussed.

<sup>139</sup> For both, No. 3 and No. 4, a positive shift on the x-axis - similar to No. 2 - is possible.

With the delineation above, the general functional relationship between synergy potential and partnership intensity could be deduced. The following sections scrutinise these functions further.

#### **6.4.2 Potentiality of Dissynergies and Synergies with Regard to Partnership**

##### **Intensity**

The discussion in paragraph 6.4.1 predominantly described the reciprocal dependence of partnership intensity and synergy potential. From a business evolutionary perspective, the way in which synergies or dissynergies are influenced by growing partnership intensity is of additional interest.

As indicated, once synergy potentials have been detected, it becomes a managerial challenge to successfully transform them into synergy effects. The way to achieve this can be paved with many obstacles. Dissynergies, thus unforeseeable obstructions in the course of a partnership, can form a barrier to converting potentials into tangible effects. More positively, however, intensive collaboration might even unearth synergy effects that were not anticipated at the outset of the alliance. The relational issues of partnership intensity and dissynergies as well as synergies can now be briefly introduced.

##### **6.4.2.1 Partnership Intensity vs. Dissynergy**

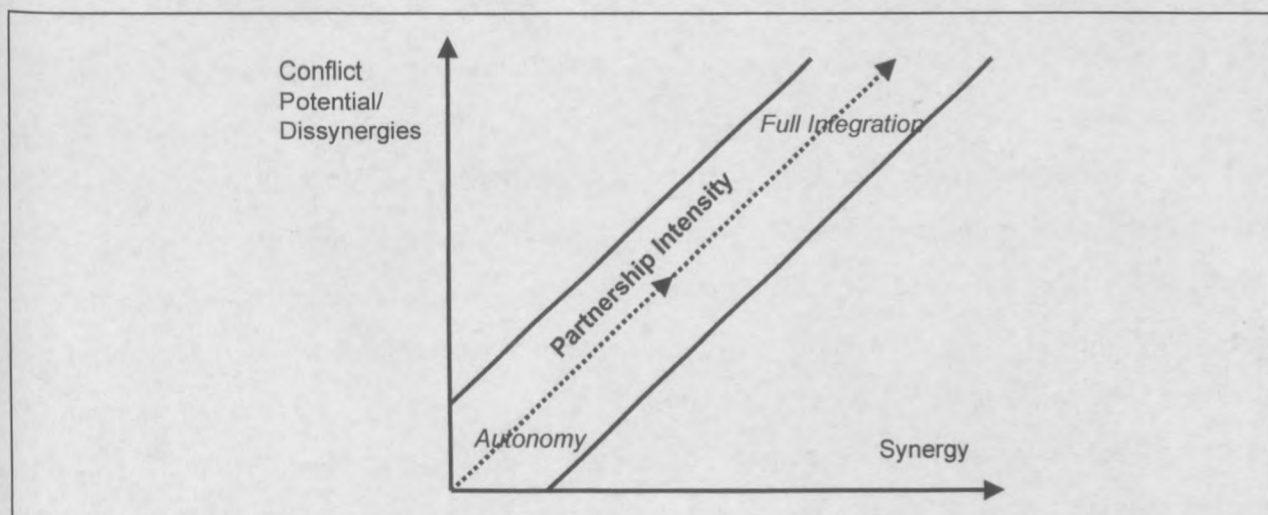
To readdress one of the aforementioned examples, Lufthansa might only be able to potentially achieve synergies with its strategic partner United Airlines. What was originally envisaged regarding the outcome of their strategic partnership could possibly not be realisable at all, or be accomplishable within a reasonable time frame, or within the constraints of a certain financial budget (see also Hirzel, 1993, Goold and Campbell, 1998). In addition, synergy effects might turn out to be unevenly diffused among the partners, leading to dissatisfaction or even opportunistic behaviour (e.g. Austrian – Swissair). Other carriers suffer from external dissynergies, blocking flourishing alliances. The partnership between British Airways and American Airlines (and so the entire Oneworld alliance) is far from reaching its synergy effects as a decision on antitrust immunity is pending and, related to this, no agreements can be reached between the UK and the USA regarding open skies. Various dissynergies can thus stand in the way of realising synergy effects.

As the explanations above have shown (see in particular figure 6.6), with an increasing partnership intensity, the potential for synergy mounts. However, the capacity for dissynergies increases as much. Closer partnerships simply have more to lose than less close linkages.



Dissynergies can thus be brought into a direct relation to partnership intensity (see Lutz, 1993, p. 195 for organisational synergy models). Figure 6.7 visualises this effect.

Figure 6.7: Graphic Presentation of the Relationship Between Dissynergy and Synergy as Determined by Intensity



Source: based on Lutz, 1993, p. 195

The figure is essentially three-dimensional as it incorporates the development of synergy and dissynergy in relation to a corridor of partnership intensity. Partnership intensity thereby develops progressively from full autonomy (low synergy, low dissynergy potential) to complete integration (high synergy, high dissynergy potential) of the participating airlines.

The basic burdens in the synergy realisation process, such as internal and external dissynergies apply. With partnerships being able to achieve greater synergies if they are more intensively involved, they also face the problem of exacerbating the capacity for conflict and the gravity of dissynergies in close relationships. Considering the co-mingling of assets and resources invested in the establishment and governance of close partnerships, the risk potential in conflicts and the loss potential (vulnerability) of dissolution becomes apparent. While close co-operations represent a window of opportunities towards harvesting higher benefits, they also exemplify collaborative hazards.

The immediate post-merger phase of, for example, Daimler Benz and Chrysler has been paved with conflicts induced by the closeness of the newly formed DaimlerChrysler co-operation. Lengthy discussions regarding seemingly trivial issues such as business card formats and letterhead styles have repeatedly caused friction between the parties of the automotive firm. Finding an adequate balance between the right synergy-generating and dissynergy-avoiding intensity level is without a doubt an art form. Airlines are usually aware

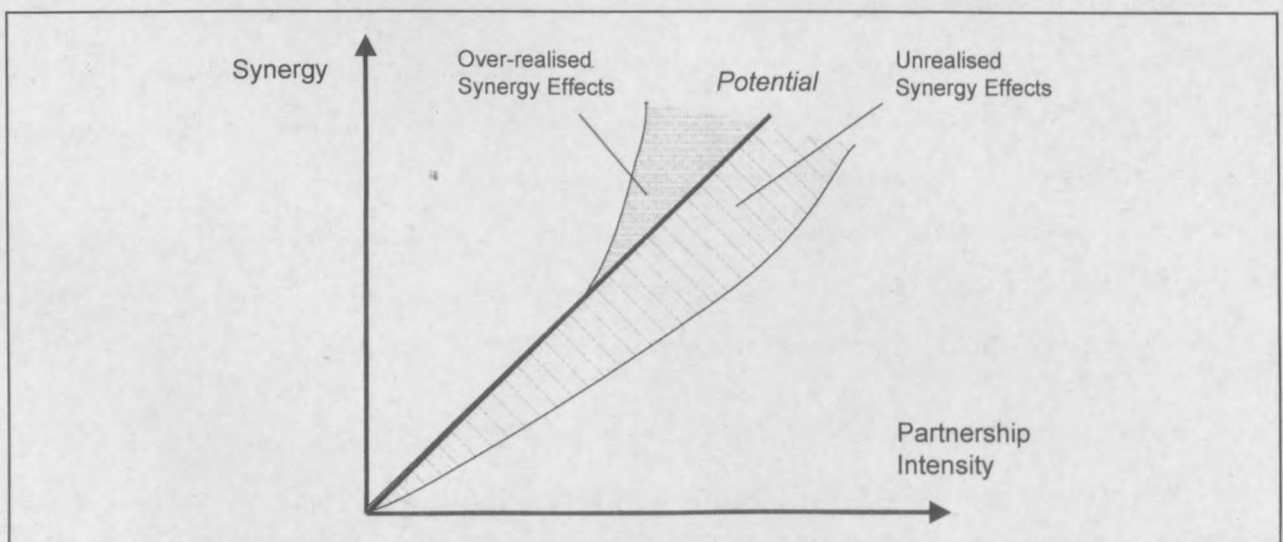
of this association and thus take gradual partnering steps to escape the likely negative effects of early, close collaborations.

#### 6.4.2.2 Partnership Intensity vs. Synergy Potentiality

Synergy is generally a function of partnership intensity - this relationship has been delineated before. The transformation of what partners expect from a collaboration into actual, tangible results, thus requires an airline's full capabilities in meeting the challenges associated with partnership management and operation. The transformation process can produce an outcome that meets all targets, under- or over-delivers the initial prospects. In contrast to the above, synergy effects can thus also surmount synergy potential. This can especially occur in the case of exceptionally well-managed, flexible and gainful partnerships where the realised outcome of the collaboration is more valuable than the foreseen results. Such a development would form an ideal basis for the partnership's subsequent advancement and making it a core for more comprehensive alliances. The South African market, for example, has witnessed the BA-Comair franchise, which - after initial obstacles - developed beyond prediction for both parties, with BA taking up a 20% share in its junior franchisee.

Figure 6.8 visualises this general connection. Assuming that partnership intensity and synergy potential follow a linear function (for other functions, see figure 6.6), the devolution of synergy effects can be as indicated.

Figure 6.8: Synergy Potential and Development of Effects in Relation to Partnership Intensity



Source: own compilation

The figure clearly illustrates the options to the development of unrealised as well as over-realised synergy effects from the basis of initially expected synergy potentials (the diagonal).



The exact position and size of un- and over-realised synergy effects are largely assumed, although they are possible. The possibility of not reaching synergy targets increases with partnership intensity and synergy potential. This connection can be deduced from the relationship between conflict potential (dissynergies) and synergy potential. Accordingly, the probability and potentiality of dissynergies increase with close collaborations. Superior degrees of integration lead to higher conflict capacity. It is consequently to be expected that unrealised synergies occur in a proportionally higher degree in intensive partnerships than in rather loose collaborations.

It is equally conceivable that synergy effects can surmount synergy potentials. Spillover effects from already realised synergies can lead to further benefits developing with the collaboration. Environmental imponderables, such as changing government policies leading to liberalised markets, can also result in actual partnership benefits being weightier than anticipated. Partnering carriers often seek these surmounting synergies by creatively searching for new areas of collaborative action. This active, progressive and creative process of advancing the collaboration can be seen as a positive development in an interairline collaboration as it shows strong commitment and the will to conclude further ties.

## **6.5 Airline Partnership Intensity Evaluator (A.PIE) as a Multidimensional Tool for Collaborative Closeness**

Synergy as the beneficial product of partnership action correlates with partnership intensity. Hence, the quantitative and qualitative value of the collaboration is fundamentally determined by the closeness of the relationship. In a further step towards developing the synergy audit model and towards introducing an audit methodology, the following operationalises the relationship between interairline synergy and partnership intensity.

As indicated above, the closeness of an airline inter-business linkage must not be exclusively associated with the scope (width) of the collaboration. Collaborations with a very limited coverage of the value chain can be as intensive in their respective collaborative domain as wide partnerships are. This indicates that even confined collaborations lead to satisfying and gainful results once the relationship potential from these partnership actions has been fully exploited.

To establish an operational tool in order to measure the intensity of the partnership and ultimately synergy, the Airline Partnership Intensity Evaluator (A.PIE) is subsequently introduced. A.PIE is a synthesis of academic facts, secondary empirical evidence, as well as

findings drawn from discussions with airline partnership practitioners and specialists. The model finds application as a tool and is an integral part of a as yet theoretical synergy auditing process, which is further described below (see 6.6).

### 6.5.1 Goals and Objectives of A.PIE

A.PIE serves a series of interrelated objectives and helps to achieve a number of goals, particularly in the context of assessing interairline benefits as part of the synergy audit. In accordance with the limitations of this dissertation, only horizontal partnerships between scheduled air transport passenger services are supported by the evaluator. Any other forms of airline collaboration with other aviation or non-aviation service and/or product providers have not been incorporated into the model's functionality.

A.PIE is a comprehensive and sustainable tool, broadly providing multidimensional objectives and goals that can be divided into:

- Individual goals: concerned with the distinct intentions of a single carrier's collaborative activities
- Comparative goals: the relative dimension of status and effects of partnership intensity
- Developmental goals: referring to the collaboration's evolution

The aforementioned goals also give an indication of A.PIE's temporal dimension. The tool can be used during the entire life-span of the interairline partnership - from preparation via formation until termination of the collaboration. While individual goals occur primarily at the outset, during the strategic decision for a partnership, and are applicable during its entire life-span, comparative goals are concerned with the joint attainment of benefits from the collaboration and thus arise *in situ*. Developmental goals incorporate the subsequent progress of the collaboration, which entails the joint intensification of the partnership, also by creatively seeking new synergy potentials, thus, synergistically, co-evolving (see figure 6.15).

A collaboration can be very individually and discretely motivated. This is because, especially in loose forms of interairline partnerships, individual, private goals are superior to commonly achievable benefits. This opportunism is widely acknowledged and even accepted, as it represents the main condition for many, mostly operative, partnerships. While it is counterproductive to simply endeavour to fulfil individual partnership goals, airlines do pursue their discrete incremental qualitative and quantitative gains from partnership action.



A.PIE thus provides the individual framework for each collaborating carrier to achieve the following synergy-related issues:

- Identification of areas of synergy potential (ex ante)
- Guiding tool to individually and sequentially realise synergies
- Identification of synergy effects (in situ, ex post)

Comparatively and commonly achieving benefits from the partnership is another objective of collaborations (see also Khanna, 1998, p. 340). Despite individualism being widely found, learning and business alliances focus on the joint maximisation of business performance through partnership action - a common set of goals is therefore salient. With regards to a comparative dimension, A.PIE thus caters for:

- Identical comparative synergy areas; benefit overlap/complementarity
- Balanced comparative synergy intensity levels; avoidance of asymmetries
- Benchmarking, quantification and qualification of partnership action

The aforementioned dimensions are only concerned with the present status of individual and comparative partnership intensity and synergy. A.PIE furthermore allows for the delineation of dynamic, developmental aspects of partnership intensity and comprehensiveness. The evaluator can thereby trigger fresh thinking. This helps to prevent systematic blind spots and makes it more likely that the review of the partnership areas will be comprehensive. In conclusion, the tool helps the development of the partnership to accomplish the following purposes:

- Identification of advancement areas for the partnership
- A practical basis for organisational intervention
- Guiding tool to the gradual unfolding of further collaborative synergies

A.PIE is, however, not a device to quantitatively measure synergy with the aid of partnership intensity. The above described synergy measures indexes, which can vary from company to company and are based on different benchmarks, need to quantify the tangible effects from collaborative action (see 6.2.5 and for tangible airline alliance benchmarks, see e.g. Merrill Lynch & Co., 2000). A.PIE mainly seeks to fulfil the aforementioned goals qualitatively, although the embodiment of a numerical dimension in the form of a rating of the partnership is also conceivable.

In summary, A.PIE thus supports unveiling of beneficial partnership activities and their effects in the following domains:

- Goal orientation and achievement of objectives
- Temporal perspective
- Partnership social and compensation perspective
- Developmental perspective

The embeddedness of the A.PIE in the synergy audit methodology is elucidated further below.

### **6.5.2 Conceptualisation of A.PIE and Key Aspects of its Application**

A.PIE is a comprehensive and multidimensional device that can find application in every type of airline partnership within the original limitation of this dissertation and considering the aforementioned goals and objectives. In line with its structure, it thus needs to take the possibilities of wide and deep as well as narrow and shallow interairline partnerships into consideration, by comprehensively covering all possible and feasible areas and forms of airline collaboration. Since A.PIE is a model, it also needs to extract some main aspects of partnership action that are relevant to collaborative intensity and synergy, besides providing a simplified assessment of the complex partnership status and process. A.PIE therefore consists of a functional and an assessing/evaluating section:

- The functional section is concerned with business activities to be evaluated regarding their collaborative intensity. This section is strongly oriented towards the airline's value chain and its primary (physical) and secondary (managerial) activities (for the airline value chain, see figure 4.4 above). However, the operability of the tool calls for condensed functionality areas of alliance activity. Hence, areas were established using real-life evidence of elementary partnership orientation and on the basis of an evaluation of further valuable partnership functions. The area selection is additionally based on an assessment of the relative importance of partnership functions for airline collaboration. The importance of certain non-core issues for interairline collaborations also motivated the addition of further environmental and soft factors representing indispensable criteria of partnership intensity. Among these is the customers' perception of the partnership's intensity, which can provide important understanding from an outside-in perspective.
- The assessing/evaluating section brings each function in a collaborative area into the context of partnership intensity by individually describing and scaling the profundity of

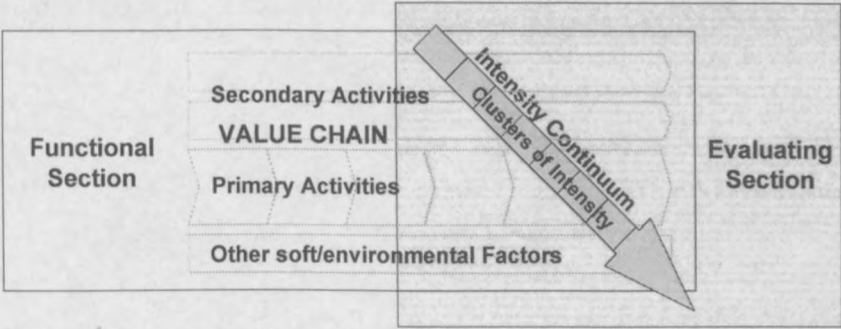


the collaboration. The assessing/evaluating section thus provides an overview of relevant, clustered partnership functions and their scaled intensity. The continuum of partnership intensity can quantitatively range from 1 - no collaboration - to 10 - common control/concentration (see appendix for the comprehensive model). However, the partnership intensity of each functional area must be defined by a qualitative continuum as well. This is why the scaled positions of the continuum are circumscribed by specific partnership characteristics. According to the continuum, the qualitative clusters outline the possible subsequent progression of a partnership from “no collaboration” to “full collaboration” or “concentration”.

The choice of functional sections and their respective assessing continuums was additionally critically discussed and subsequently adjusted with the aid of a panel of airline and strategic alliance experts (see chapter 1 for research methodology). This procedure aimed at achieving highest possible accuracy and topicality in the selection of items as well as internal consistency.

The basic sectional set-up of A.PIE is summarised in figure 6.9.

Figure 6.9: A.PIE Structure



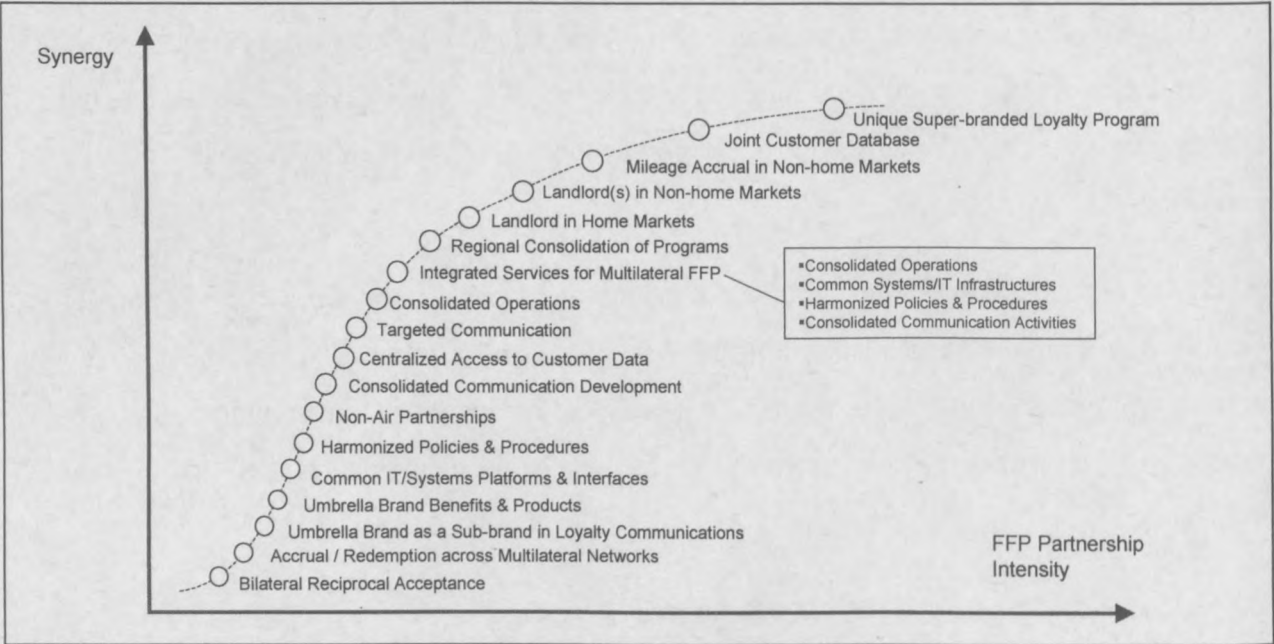
Source: own compilation

The figure displays primary and secondary value chain activities/functions as well as soft and environmental factors in the functional section of the A.PIE model. For each separately defined activity, a continuum has been designed with a clustered partnership intensity classification, comprising the evaluating section.

Classifying partnership intensity clusters can be a complex task. A gradation of collaborative forms in the continuum between “no collaboration” and “full collaboration” is often not easily achievable, as in reality either many different or very few discrete levels or gradual steps of intensity exist. Exemplary of a greatly detailed continuum, figure 6.10 depicts the integrative

progression of a FFP, with clustered intensity levels and the resulting synergy. The FFP thereby migrates from an individually utilised loyalty device by a single carrier, to a commonly applied superbrand marketing tool.

Figure 6.10: FFP Integration Intensity Continuum



Source: own compilation

Whether this degree of detail is operational for each of the evaluated functions remains questionable. A main criterion for practicable intensity continuums is the display of discrete and separable integration steps from no collaboration to full integration. In this regard, the detailed FFP example shows that a clear path of synergistic intensity expansion up to full integration can be designed for separate corporate functions and businesses.

Table 6.1 provides an overview of the functions and the soft/environmental factors included in the A.PIE structure. A comprehensive description of the continuum, including the assessing/evaluating section and the clusters of intensity can be found in Appendix B.



Table 6.1: A.PIE Evaluation Clusters

Partnership Structure	
General Set-Up	Type of Collaboration
Primary Functions	
Procurement and Finance	IT Hard-/Software
	Purchasing of Strategic Input Factors
	Fleet Planning/Purchasing/Co-ordination
Ground Operations	Operations Control
	Ground Operations
	Airport Facilities
Maintenance/Technical Operation	MRO
	Spares, Service Purchasing
Flight Operations	Destinations Affected/Geographic Restriction (Network Width)
	Frequencies Available for Partnership/ Available Inventory (Network Depth)
	Schedule Development/Planning
	Network Structure
Passenger Service/Product	Passenger Handling (Pre-flight, Post-flight), Check-in, Check-out
	Inflight
Marketing/Sales /Distribution	Marketing Operations and Strategy
	Branding
	FFP
	ALP/CLP
	CRS
	Sales Teams
	Online Distribution
	Yield Management
	Pricing
Secondary Functions	
General Management	Strategy Development/Business Planning
	Governance
	Accounting, Finance
	Revenue Management
Personnel Management	Human Resources
Information Management and Logistics	IT Strategy
Others	
Customer Perspective/Look Outside-In Interaction with External Environment	Perceived Closeness of the Relationship
	Government Relationship
	Air Service Agreements/Regulation
	ATC, Airports, Others
Benefit Areas	Objective Focus /Ambition
Knowledge and Know-How	Learning Potential
	Knowledge Transfer
Business Culture	Status Quo/Adaptation Process
Loss Potential	Number of Alternatives
	Re-creation Effort/Exit & Entry Costs
Trust	Uncertainty/Vulnerability/Control
Collaboration Authority	Power Perception

Source: own compilation

By evaluating each of the above-mentioned functions and areas in terms of their clustered intensity, the desired goals and objectives of A.PIE can be ideally achieved, namely to draw a comprehensive picture of the closeness of the collaboration.

The specific evaluation and interpretation of the results, however, varies with the different objectives and goals partners pursue in applying the A.PIE. These were described above (see 6.5.1) and impact on the process of concluding from the intensity evaluation process.

- Individual evaluation must be benchmarked against perceived and desired synergy potential and synergy effects. This is important as certain partnerships are not designed to

be overly profound. A codeshare agreement would not receive the highest absolute partnership intensity rating.<sup>140</sup> However, if the partnership strategy and the agreement based upon it do not permit a closer type of collaboration, then A.PIE can help to identify further functions of collaboration in line with this intensity level. In addition, the model can support the detection of domains that are below the overall intensity level and provide guidance for the subsequent development of the partnership.

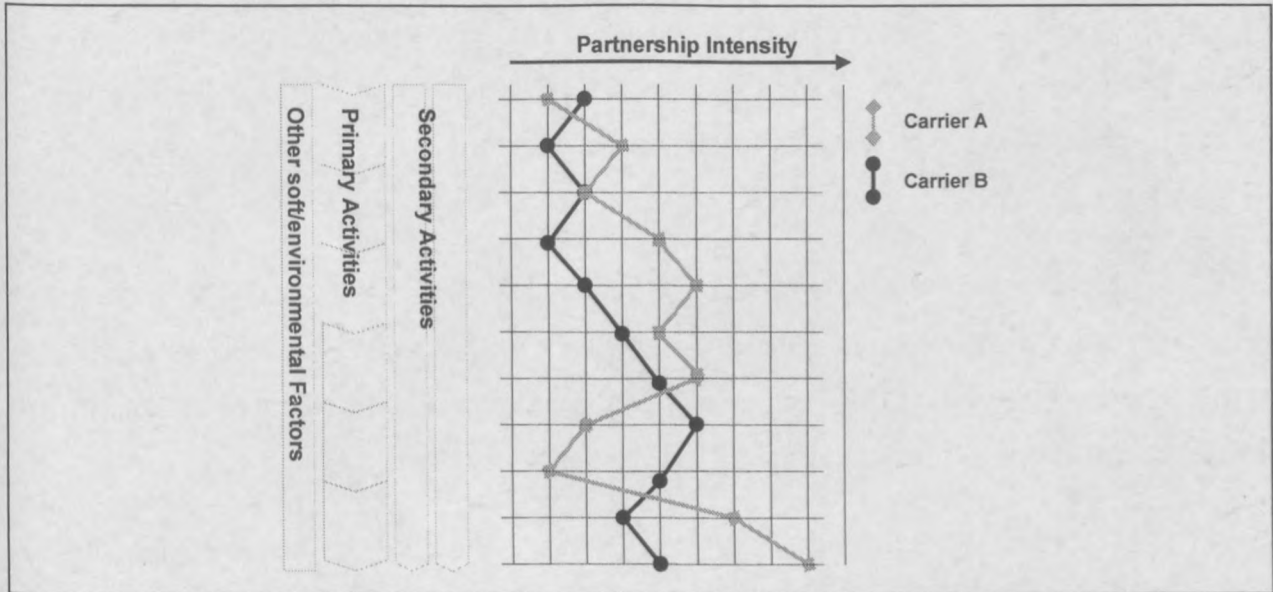
- Comparatively evaluating partnership synergy against intensity goals can give an indication of intensity congruence among partners. In this respect, a distinction concerning the operability of intensity evaluation needs to be made with regards to value chain activities and the soft/environmental factors. While value chain activities can often be objectively evaluated based on partnership agreements, and the legally determined issues and ensuing design and operation of the partnership, the rating of soft factors can be more biased. Soft factors, which form a significant part of the partnership capital, are mostly not determined in any legally binding format. Their evaluation relies on the participants' perceptions of the collaboration. Herein major intensity discrepancies regularly surface. These originate from misperceptions of the collaboration and individual definitions of partners' standing within the alliance, the contribution to the partnership, and the understanding of the power constellations. Soft, and sometimes environmental evaluation factors thus leave room for individual interpretation, which can occasionally represent a domain for dissynergies based on mutual misperception.

In comparatively evaluating partnership intensity, the A.PIE can graphically give indications of exactly these shortcomings of the partnership. As discussed, synergies should congruently occur for each airline participating in a partnership. One-sided expectations and materialisation of synergies represent potentials for conflict and should be avoided. A.PIE provides the possibility of a clear, descriptive and graphical identification of the intensity of partnership areas across the collaborating spectrum. In the form of a semantic differential, it can thus comparatively depict the stature of a relationship.

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<sup>140</sup> Codesharing would be mainly concerned with marketing functions and would receive higher ratings in this category as it would also result in higher ratings assessing the outside-in perspective (passenger perception).

Figure 6.11: Intensity Semantic Differential



Source: own compilation

The figure is fictional in the positions and courses of the graphs, and simplified in terms of the number of evaluating activities and soft/external factors. Its devolution, however, could apply to the evaluation of soft and environmental factors of the partnership.

In the case of - fictionally - evaluated partners A and B, the graphical devolution illustrates that the intensity of the partnership is not rated equally. While it is uncommon for partners to assess the intensity of their collaboration as differing drastically, or even antipodally, the perception of partnership intensity can vary greatly in certain areas. This is especially true of soft factors that are harder to evaluate objectively. An example in the South African market illustrates this context. Two carriers were operating parallel codeshare operations between South Africa and an Asian capital. While the African carrier saw the basis for further development of a more strategic partnership, the Asian carrier merely regarded the agreement as being of a limited duration and merely undertaken in order to operatively “manage competition” on Africa-Asia trunk routes.<sup>141</sup>

Similar set-ups are perceivable in small-big interairline partnerships. A smaller carrier might feel that all of its business decisions can be taken independently, whereas the larger partner insists on having a strong say in, e.g., the establishment of the junior counterpart’s new route services. For both the partners, partnership intensity, in particular perceived intensity and thus synergy for discrete activities of the value chain, lie on different levels. The consequence is

<sup>141</sup> Information garnered from expert interviews. The carrier names are known to the author.



that the allies do not equally benefit from the partnership. In the aforementioned form, A.PIE is a tool to graphically juxtapose partnership intensity, which must ideally result in a quasi-parallel devolution of the graphs. Diverging intensity levels are sources of friction, leading to drastic partnership dissynergies, which then need be redressed by partnership development and governance.

A.PIE finds application in a wider synergy auditing context, which is why, due to varying perceivable auditing organisations, a detailed framework for the practice of its employment can not be given at this point. However, certain generic rules need to be followed in order to harvest best possible results from the intensity evaluation:

- The assessment needs to be conducted by authorised and skilled personnel. In the best case, the synergy audit team carries out the intensity evaluation (see 6.6.1.2 for organisational alternatives of the audit). Neutrality in gathering the necessary information from the sample airlines must avoid data collection, processing and interpretation bias.
- A.PIE draws its conclusions from a comparative assessment of the intensity of the partnership's core value chain activities, additional functions and soft and environmental factors. Consequently, it is important to analogously conduct the intensity evaluation for all evaluated partners. This parallelism is required to incorporate the same assessment methodology for the entire sample. Additionally, data gathering processes need to be identical and empirical evidence must be collected from similar sources within the research objects (i.e. personnel with matching functional backgrounds and seniority inside the sampled carriers).
- For certain evaluation areas, i.e. soft and environmental factors, preparatory research needs to be conducted in the form of passenger surveys, regulatory assessments or other external evaluations, in order for A.PIE to be adequately completed. These surveys need to be planned and carried out ahead of conducting the A.PIE as such, they must follow similar or identical methodologies for the sample carriers and their results need to be submitted at a fixed date.
- The evaluation of partnership intensity by means of A.PIE should be conducted in a predefined, rather short period of time, in which the entire sample is assessed. This is to avoid shifts in the partnership or corporate changes of one of the sampled airlines to impact unevenly on the assessment or to distort the overall result.

- The results of the intensity evaluation should be reviewed and cleared of random errors before being interpreted, published or made a basis for partnership-strategic decisions. Validity and reliability measures therefore should be applied.
- An interpretation of the intensity evaluation's results must be carried out for each functional section. The conclusion drawn from assessing the results strongly depends on the original focus of the audit, i.e. whether individual or comparative goals were pursued in conducting the audit (see above for individual and comparative dimensions).

As the A.PIE is embedded into an audit context, the rules above can only provide general guidelines for carrying out the evaluation. Detailed structural and organisational principles will be determined by the respective audit set-up.

The following paragraphs describe the overall concept in which A.PIE should find application as an evaluating tool, namely the synergy audit concept.

## **6.6 Synergy Auditing Model**

Auditing plays a significant role in partnership development and management, from reviewing potential partners and structuring operating agreements to evaluating operations and verifying performance results (see Applegate, 1998, p. 54). On the other hand, synergy has been defined as the key motivator and driver for interairline partnerships. Its positive effects as well as the potential disadvantages arising with the desire for gainful partnership action have been discussed (see 6.3 and 6.3). How, in a structured manner, synergy can be detected, managed and enhanced during the partnership's whole life-span, remains to be described. Before the entire synergy audit concept can be delineated, however, some general aspects, and key prerequisites of auditing must be introduced.

### **6.6.1 General Audit Criteria**

Audits are used to verify the compliance with agreed standards. They are not designed to be once-off measures, but should be applied as continuous improvement tools (see Karapetrovic and Willborn, 2001, p. 13). In an alliance context, auditing should be an independent, objective assurance and consulting activity created to add value and improve an organisation's partnership operations. Ideally, this is accomplished by gathering useful information on the full spectrum of issues with which collaboration management is concerned (see Beeler, 1999, p. 74). Audit, in the context of this dissertation, is hence not concerned with the widely used financial audit, or compliance checks with ISO standards such as quality

and environmental audits,<sup>142</sup> but with a general examination of partnership performance and the benefits company linkages produce.

Main components of audits are agreed standards and the compliance of the system with these standards. Compliance can therefore be assessed internally, between a firm and its environment and other stakeholders, and in any type of inter-company partnership. Some generic audit types in an alliance context, particularly to review audit practice and to introduce the audit nomenclature, can now be described.

#### 6.6.1.1 Typological Audit Perspective

Partnership activities about to produce gainful results for participants are exposed to a number of challenges. Auditing is a practicable tool for assessing whether the means of combating these challenges comply with agreed standards and expectations. Typologically, audits in partnerships can take different forms, depending on the content and the original auditing objective (see Strickland, 1999, pp. 22-23).

- Financial audits: An audit type oriented around financial-statements, focussing mainly on the books and records of the partnership. Financial alliance audits thus require adequately defined measurement indexes as well as historical and actual financial figures.
- Regulatory compliance audits: A review of compliance with laws and regulations within the airline partnership and its environment. A compliance audit can give management high-level assurances on the most critical items that may negatively affect the collaborative venture and be of interest to regulatory and/or government agencies. For airlines seeking and being active in partnerships, compliance with regulations plays an important role in the legal and regulatory environment in most regions around the world.<sup>143</sup>
- Standard compliance audits: These types of audits find application in close relationships that are based on strict and pre-defined codes of business behaviour and governance. Standard compliance audits are usually built into franchise agreements and ensure the franchisor that all commercial and operational terms of the agreement have been complied with.

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<sup>142</sup> See, e.g., ISO 9,000 (quality audits) or ISO 14,000 (environmental audits).

<sup>143</sup> Regulatory compliance audits, e.g., also entail codeshare safety audits, which are a mandatory measure for US airlines prior to receiving approval for codeshare operations.



- **Management/regulatory reporting:** Focuses on the completeness and accuracy of internal management reporting (on business results, processing or control exceptions) and externally issued reports (such as regulatory, financial, or public reporting requirements). This approach provides reassurance about the information flow within the partnership and with other external stakeholders.
- **Internal control audits:** Basically, audit types in this category include a targeted or limited-scope review of a specific aspect of the partnership venture (such as maintenance, sales and marketing, knowledge, learning and growth) and a full-scope review, which could cover the entire collaborative value chain. Individual control audits are performed separately by each member of the partnership. Each partner may indeed define these audits differently and desire varying levels of review, to which the partners would need to agree up front, should the results be shared.
- **Customer compliance audits:** This measure focuses on how an alliance is viewed by its customers - looking in from the outside. Typically, passengers evaluate an airline partnership according to certain performance measures. The perceived performance can then be benchmarked against agreed standards.

The aforementioned types of audit have introduced auditing scopes that are highly relevant for assessing compliance with fundamental partnership issues. They are, however, each confined to a pertinent, but yet restricted, audit objective and only apply to partnerships in situ. The synergy audit is more comprehensive. While each mentioned audit type lends some of its capacity to the synergy audit, it does not fully comply with either of the above. This is particularly true of the temporal and functional orientation. Being qualitatively oriented, the synergy audit makes use of some assessing aspects of the aforementioned audit types and amalgamates them into one audit process, applicable to the partnership's entire life-cycle (for partnership life-cycles, see Spekman et al., 1998, pp. 760-763).

#### **6.6.1.2 Structural-organisational Perspective**

Auditing plays a more or less important role in different industry sectors. One industry, which is certainly the heart of quantity-driven audits, is the financial service industry. Others, e.g. the production sector of commerce, have recently been intensively involved in auditing product and process quality and the compliance with environmental standards. Just as there are infinite approaches to auditing financial institutions, there may be various options for delivering audit services with varying depths of audit coverage to airline partnerships. Each

pattern for structuring the audit approach and the type of audit to perform - some of which are discussed below - has advantages and disadvantages.

The synergy audit for interairline partnership action can be performed on an individual basis or jointly among the partners. For the subsequent progress of the partnership, and in order to avoid conflicts in the partnership, an open, joint audit process is certainly preferable. This approach would redress the ubiquitous concerns of power imbalances and appropriation. However, as airlines may wish to gain information on the individual value of the collaboration for the sake of their individual strategic development, separate synergy audit cycles can also be envisaged.

Generally, the conducting of synergy audits fall within the responsibility of the partnership management. Since governance can be purely internal or internal and/or external, depending on the set-up of partnership managerial structures, different structural audit alternatives are perceivable. As the synergy audit is a comprehensive and integral tool, its tasks can be completed by specialists originating from the respective functional areas. In a partnership project management organisation, these functions need to be shared between the partners in order to accurately design, implement and merge the results of the audit. It is most crucial in this context that the right to audit is stated in the partnership contract. Structurally, audit types can take the following forms (see Strickland, 1999, p. 22):

- Internal assurance group: An internal audit group is created or an existing group is leveraged to perform assurance and compliance testing of policies and procedures within an individual partner. The group typically reports to the partnership management and provides the results of testing and does the follow-up of issues. The results need to be detailed and focused on specific compliance issues, also with regards to the chronological stage (planning, management, and advancement) of the collaboration. Internal auditing results usually are not shared among the partners. Internal assurance groups certainly need to conduct audits prior to entering a partnership. As part of a synergy due diligence process, their task can be to detect ex ante collaborative synergies based on audit findings.
- Joint audits: Resources from each of the partners' internal audit functions (if present) are occasionally combined to design and implement a collective audit of the partnership. This type leverages expertise from each partner in the business, systems and operations, and shares the results of the combined review with all allies and partnership management. Joint audits are particularly appropriate when the collaboration is not yet operating on a common managerial platform with one set of documents, operations and procedures -

which is usually the case in most airline partnerships. Joint audits offer the potential to eliminate redundant audit work and provide a venue for best practice sharing and development (see Applegate, 1998, p. 54). These audit types ensure that all parties receive results of equal quality, they can level size differences between the partners and redress appropriation concerns. Joint audits certainly provide the most unbiased findings, as all partners can participate equally. Possible disadvantages include difficulties in arranging for experts from the different partners to be assigned to the audit simultaneously, as well as problems in agreeing on audit procedures and reporting criteria.

- **Reliance on and sharing of one partner's audit results:** In certain cases, especially in asymmetrically sized partnerships, one partner may lack the resources or expertise to adequately perform a collaboration audit. Therefore, partners place trust on one ally to conduct the audit and share the results with all allies. Most ideally, the auditing party discloses the entire structure and operation of the audit programme to its partners. In multilateral partnerships, this may imply that information is supplied to partners who are not conducting the audit themselves. Sharing of audit results thus requires trust in the auditing airline's audit performance, its interpretations and final judgements. Appropriation concerns, and the loss of independence and partnership authority can not be fully removed. This structure is obviously only feasible for in situ synergy audits, since it requires the collaborating parties to be in an operational, stable relationship.
- **Creation of a permanent internal audit function within the partnership:** This approach is similar to that of joint audits but is permanent in nature, but relies on partnership management to hire competent and experienced audit professionals. It should be structured in such a way that the audit function reports directly to an audit committee (ideally) of the partnership management board. The partnering firms would receive reports and information through their representative in the partnership management organisation. The budget, charter, and overall audit methods of this function can be designed in consultation with the audit departments (if existent) of the airline partners. This type provides a more independent approach to auditing the collaboration, but usually requires a close collaboration between larger airlines.
- **Hiring audit expertise:** Typically, each partner has a different approach to audit programmes, based on its respective culture and - if existent - audit practice. A common strategy in partnerships (particularly joint ventures) is to appoint an outside firm to perform internal control reviews of the partnership, often in conjunction with an annual audit of the financial statements. For some partnership ventures, this practice represents a

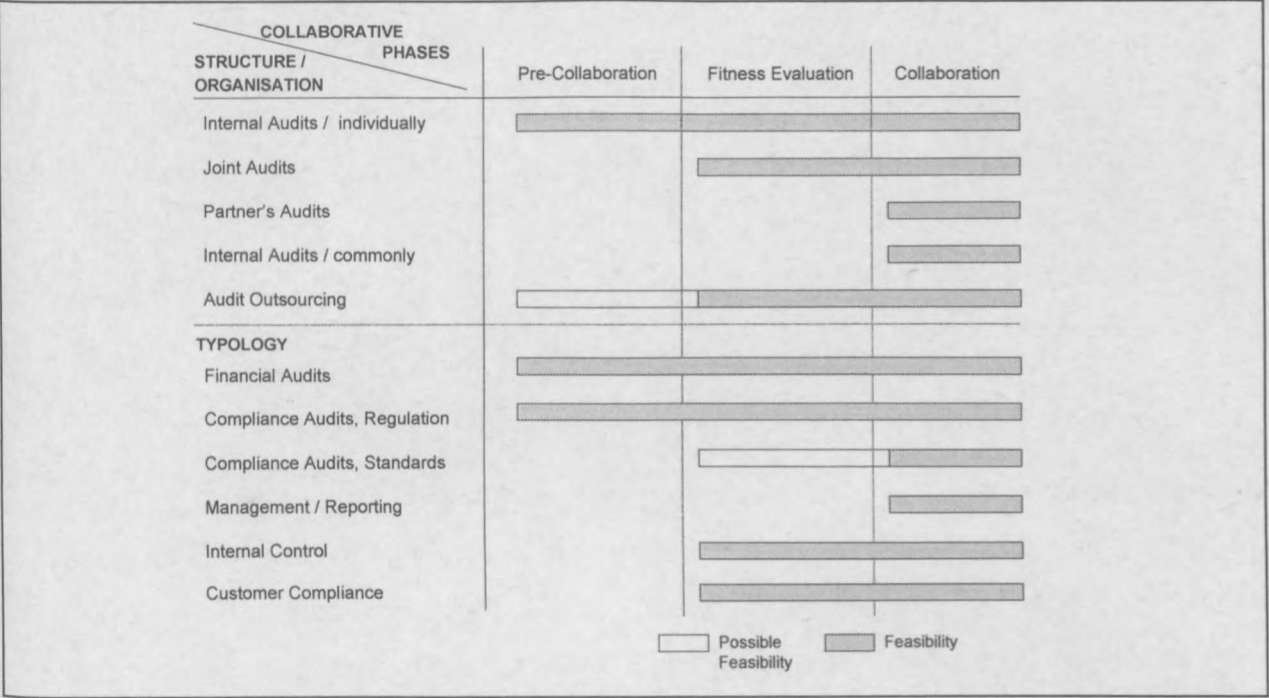


cost-effective approach that provides fully independent results, which can be shared equally with all stakeholders. This audit approach, although externally and independently performed, usually focuses on quantitative data and therefore lacks comprehension of soft issues that are relevant to the synergy detection process. In general, as there are usually no standards for partnership synergy audits - as opposed to, e.g., environmental or quality audits - audit processes and standards for this audit type have to be defined prior to auditing the collaboration.

The selection of a particular audit type largely depends on the size of the collaboration, its closeness and the importance for the overall business performance, individually as well as comparatively. As audits commonly require investments, bind staff and occasionally obligate the procurement of external expertise, the costs of the audit need to be weighed against the expected benefits from the process. Clarity about this matter should result in a general view of the investments in synergy audit programmes, which, in turn, ought to determine the choice of a structural type of audit. However, certain types of audits are more suitable, especially when needing to make allowance for the specific demands of airline partnership variants, and to satisfy the requirements during the developmental phases of the alliance.

Figure 12 depicts a summary of audit typologies and structures being feasible or possibly feasible for certain audit phases or life-cycle phases in airline partnerships. The pre-collaboration phase is mainly concerned with an individual airline's strategic decree prior to starting with comparative fitness evaluation procedures.

Figure 6.12: Audit Structure and Typology Feasibility in Collaborative Phases



Source: own compilation

6.6.1.3 Audit Nomenclature and Corresponding Synergy Audit Definition

Set against the background of the above-described typological and structural-organisational audit perspectives, the following nomenclature needs to be introduced in order to conceptualise an audit. The references are thus concerned with the synergy audit and define its specific categories.

Table 6.2: Audit Nomenclature

Terminology	Definition	Airline Synergy Audit Reference
Auditee	Organisation(s) to be audited	<ul style="list-style-type: none"><li>Prospective airline partners</li><li>Airlines involved in partnerships, bi- or multilateral</li></ul>
Audit Objective	The definition of the audit's purpose	<ul style="list-style-type: none"><li>Synergy potential</li><li>Synergy effects (materialisation of synergy potential)</li><li>Balanced materialisation among partners</li><li>Benchmarking synergy vis-à-vis other alliances</li><li>Dissynergies</li></ul>
Audit Scope	The definition of the extent and boundaries of the audit in terms of factors such as physical location and organisational activities	<ul style="list-style-type: none"><li>Horizontal interairline collaboration</li><li>Value chain areas already or potentially (creative areas) affected by the partnership</li><li>Extent according to the partnership agreement</li></ul>
Audit Criteria	Policies, practices, procedures or requirements against which the auditor compares collected audit evidence on the subject matter	<ul style="list-style-type: none"><li>Partnership strategic decree (single airline)</li><li>Partnership fitness</li><li>Intensity of the collaboration with regard to the audit scope</li><li>Synergy benchmarks</li></ul>
Audit Evidence	Verifiable information, records, statements of fact	<ul style="list-style-type: none"><li>Suitability</li><li>Intensity scaling of hard and soft factors</li><li>Other qualitative and quantitative information</li></ul>
Audit Team	Team designated to perform a given audit	<ul style="list-style-type: none"><li>Independent (partnership management)</li><li>Independent (appointed)</li><li>Single-sided or</li><li>Commonly-agreed joint internal audit team</li></ul>

Source: own compilation and ISO, 1996, p. 1

Further tasks of the auditing organisation and its processes are:

- The design of the overall synergy audit policy
- The transformation of policy into meaningful programmes and auditing processes
- The deployment of humans resources, hard-, software, and infrastructure resources
- The audit quality assurance
- An assessment of the effectiveness in meeting the audit policy, including policy changes
- Continuous improvement

### **6.6.2 Hierarchical and Functional Synergy Auditing Conception**

The structural-organisational description, as well as the cardinal objectives of synergy audits, lead to the conclusion that the auditing function needs to be embedded - in some form or another - in partnership management. However, common audits, particularly those dealing with interfirm linkages, tend to lack proper conceptualisation and management systems (see Strickland, 1999).

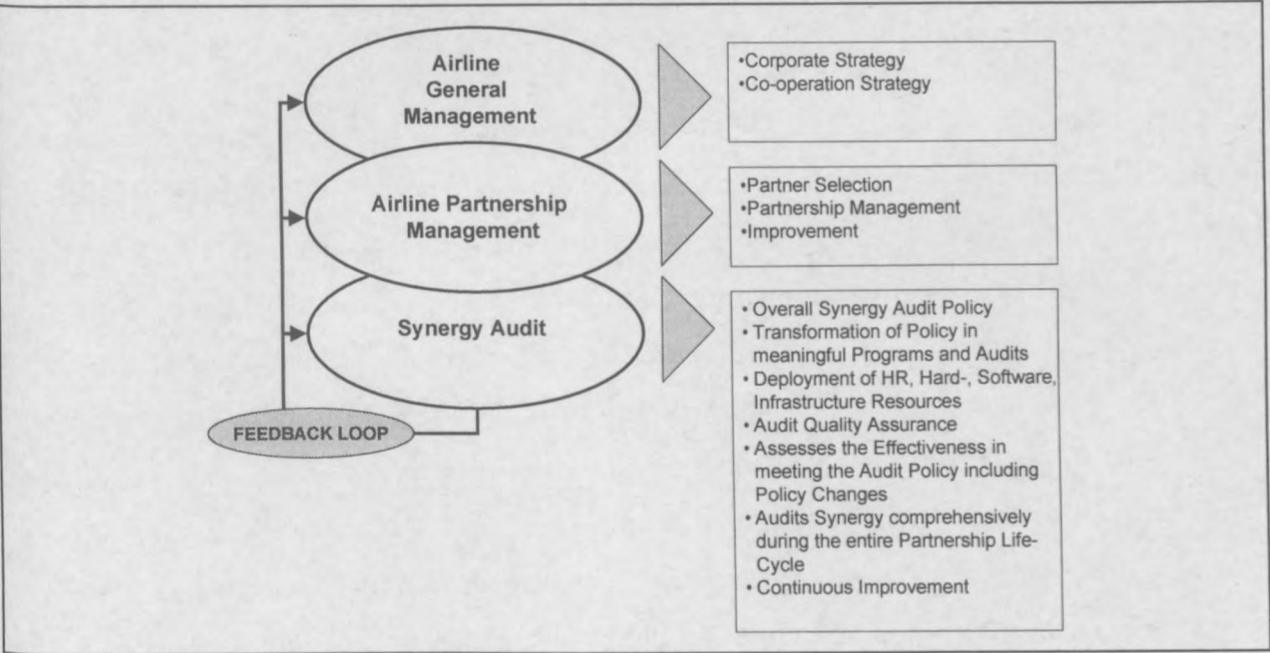
Concerns should thus be raised about the usefulness of audit applications for continuous business improvement, the inconsistencies of audit processes and results and the value of compliance audits in understanding complexities of business systems (see Karapetrovic and Willborn, 2001, p. 13). In scrutinising the airline industry and its partnership management, structured, consistent and recurring approaches to detecting and enhancing partnership synergy could not be observed, neither in an audit nor in some other format. While there is a strong need to enhance airline alliance's business performance, there is a clear gap between this need and the application of adequate managerial and functional systems to do so (see also Applegate, 1998, p. 53).

The embeddedness of synergy audits in partnership management systems needs to be advocated by using a systematic approach. Interdependent, goal-oriented and driven processes and related resources are required to support the incorporation of the synergy audit within the partnership's structures. The type of audit can thereby give indications of the configuration of the audit function itself, while the synergy audit definition points to the audit content. With regards to its organisational anchoring, the synergy audit needs to be a partially integrated and interrelated function of partnership management, which itself is a subsystem of general management. The synergy audit is therefore connected to other managerial systems that exist beyond its particular boundaries.



Ideally, auditing objectives must be aligned with - if existent - the overriding audit objectives, which in turn must correspond to the overall partnership management and general management policies and goals. Information flow, resource allocation, and project management structures are required to be adjusted between the management organisation and the auditing in order to avoid frictions. Figure 6.13 depicts the position of the synergy audit in the hierarchy of management systems and illustrates its most elementary tasks.

Figure 6.13: Synergy Audit in the Managerial Hierarchy



Source: own compilation

Hierarchically, the synergy audit is a function and thus subordinate to airline partnership management. For whatever procedural type of audit in the collaboration’s life-cycle, partnership management is charged with organising the synergy audit process (see Applegate, 1998, p. 53). An important feature of the synergy audit is the feedback loop. Results of the audit have to be referred back to partnership management. The immediate outcome of the synergy audit, the detection of frailties and imbalances or areas of synergy potential, need to be made a basis for partnership managerial decisions.

General management, as the deciding authority regarding corporate strategy, also requires information on the status and developmental possibilities of partnership action and formation. The findings of the auditing process can impart crucial information for future partnership managerial and corporate strategic decisions. However, partnership management can also directly contribute to the audit’s development by providing critical advice. Only once

feedback from the audit process has lead to its own improvement, can the adequacy of further audit cycles be achieved (see Karapetrovic and Willborn, 2001, p. 21).

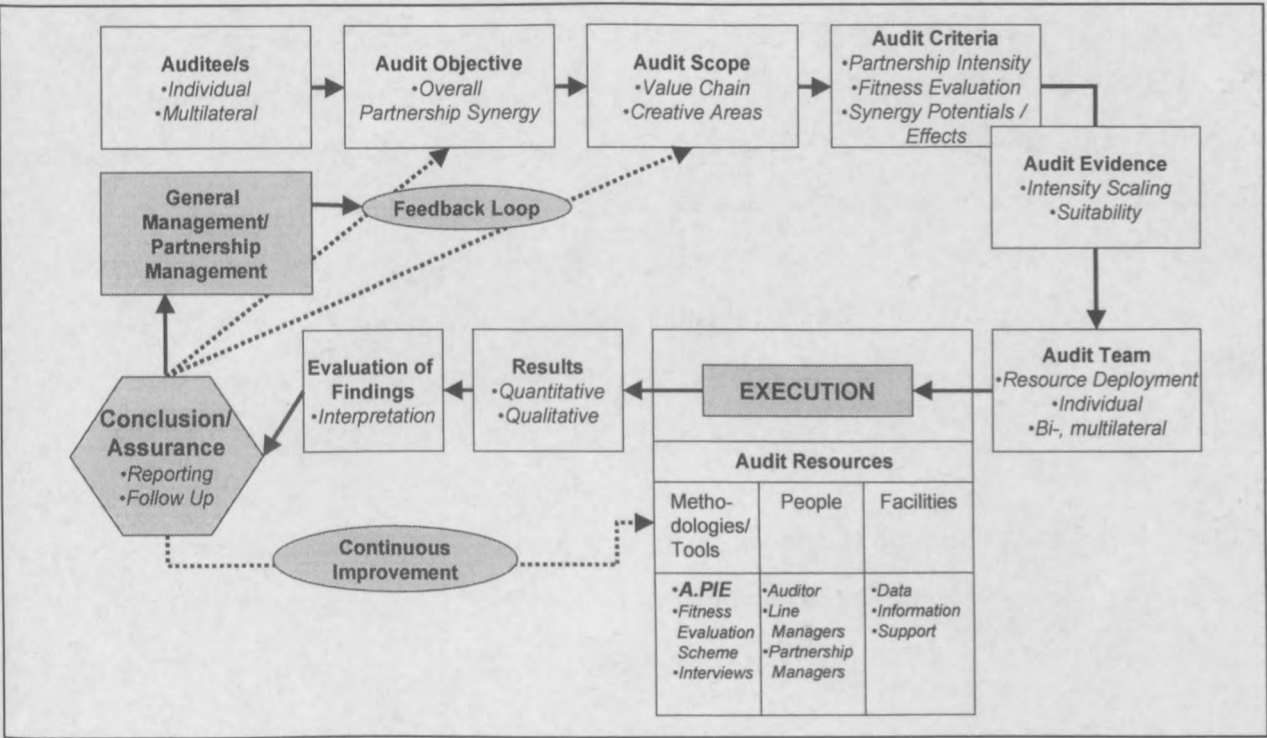
### 6.6.3 Sequential Synergy Auditing Conception

Various interrelated auditing processes, such as resource allocation, project management as well as the actual auditing and reporting of audit results, comprise a synergy audit. The auditing process also includes the identification of audit criteria, collection and verification of audit evidence and comparison against audit standards. These separate, yet related and linked steps comprise the sequential synergy audit conception.

Two main features of successful auditing processes are dynamism and an adaptive character (for adaptive partnership governance, see Spekman et al., 1998, p. 763). These characteristics illustrate the audit system's ability to accommodate environmental changes and cyclical movements instead of being procedurally immobile and inflexible. The external environment, both regulative and competitive, can inflict drastic changes on the airline industry. These changes need to be absorbed in a levelling as well as in an adaptive manner. The synergy audit furthermore needs to adjust to conditions in the airline partnership environment in such a way that it ensures that audit policies and objectives are met. The dynamic features of a well-planned and implemented audit system will facilitate and simplify suitable and effective integration of changing audit programmes. Feedback from the audit, not only with regard to the results of the process, but particularly with regard to the suitability of the synergy auditing itself, needs to be absorbed for the continuous improvement and design of the synergy audit.

The following figure serves as a framework to describe the sequences of a synergy auditing process in a more detailed manner.

Figure 6.14: Sequential Synergy Audit System



Source: own compilation

An individual airline or a group of carriers need to be defined as auditees. The choice of auditees is largely dependent on the life-cycle phase of the partnership, on the fundamental set-up, and the form and instruments of the collaboration. Generally, all sequences of the audit are greatly influenced by the discrete stages of partnership evolution. Pre-collaboration audits are performed individually and are commonly based upon a confined set of data and assumptions. Auditing a more developed interairline alliance entails including actual partners in the audit and guarantees that comprehensive amounts of information can be assessed. The circular audit process thus receives refinement in the course of partnership evolution and with more data being at the disposal of the iterative auditing process. Thus, all phases of partnership planning, from the initial investigation via fitness evaluation and the final choice, to the configuration and operation of the partnership can be subject to synergy auditing, which evidently determines the group of auditees.

The audit objective of the present evaluation is partnership synergy, potential and effects, thus collaborative benefits. The scope of the audit has to be defined in the light of the scope of the partnership and needs to comprise all areas of interairline collaboration. Partnership action along the value chain can serve as a guiding premise for the auditing scope. However, also the creative, if future, terrain of partnership action can be audited.



An audit always has to be conducted according to some benchmark, standard, regulation, guideline or set of rules, categorised under the common name of audit criteria (see Karapetrovic and Willborn, 1999, p. 20). The prime gauge for the synergy audit in this context is partnership intensity and fitness evaluation. Criteria have to be tested against audit evidences, which are the measured collaboration fitness and its intensity. They are based on intensity scaling, partner suitability and synergy potential. Audit evidences must be reliable and sufficient, should be obtained by validated auditing techniques and need to be collected within the audit scope. As no standardised benchmark for partnership intensity exists, the goals and objectives of A.PIE, in particular the necessity for levelled synergies, serve as a set of audit evidence (see 6.5.2 for key issues of applying A.PIE). Fitness evidence can be gathered in a way similarly to the intensity evaluation structure introduced above. However, in order to execute the audit and to complement the A.PIE, a set of measures needs to be explicated in the form of a fitness evaluation screen.<sup>144</sup>

The audit team needs to be selected individually. Its composition primarily depends on the group of airline auditees, the general structure and audit type as well as the partnership phase in which the audit is carried out. Some perceivable auditing structures have previously been introduced.

The execution of the audit is finally carried out with the aid of auditing resources. People, methods and tools as well as facilities have to be selected in order to perform the actual audit. Aside from adequately preparing the audit, auditing resource allocation is of the utmost importance for the result-finding process. Resource allocation must respect the audit scope as well as the auditees. An audit might, for example, entail a larger airline scrutinising a smaller partner. Objections from, or organisational shortcomings by, the junior ally could inhibit support of and participation in the audit. Satisfactory resource allocation by the auditee should therefore be ensured. In auditing any firm, the audit team should consider the needs and requirements of the partners, the cost, and resource availability in order to conduct a purposeful audit (see Strickland, 1999, p. 21).

This auditing result mechanism is based on the methodology to be implemented in the execution of the audit. The execution methods can be multifarious and include quantitative and qualitative measures. Questionnaire surveys and focus group discussions are therefore

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<sup>144</sup> The fitness evaluation screen can incorporate partner fitness assessment criteria. A detailed conceptual description will not be given at this point.

regularly used (see Goold and Campbell, 2000, p. 77). A selected methodology should be able to prioritise significant audit execution elements and thus allow the auditor to concentrate on areas critical for the airline's partnership performance. For the underlying audit, A.PIE is the key methodology for the in situ synergy audit processes. Personnel involved in the audit should, at least to a certain extent, come from the partnership management field as well as from line managerial functions (see Beeler, 1999, p. 78 and 6.5.2 for the general organisation of carrying out the A.PIE). In auditing creative synergy areas, strong and enthusiastic champions should be included to identify priority opportunity areas (see Goold and Campbell, 2000, p. 78).

The results of the auditing execution, and after their appropriate evaluation, lead to the reporting and follow-up of the findings. Where the audit shows discrepancies between the actual synergy status and the audit criteria, corrective and preventive managerial action needs to be taken to eliminate the causes of the discrepancy. In addition, the audit structure and type of audit coverage chosen for one auditing cycle, may not be the most pertinent selection for the coming iteration. In any case, the audit should provide opportunities for and contribute to continual improvement, not only as far as the audit process is concerned, but also regarding the audit methodologies. This can be accomplished by conducting follow-up audits on the implementation and effectiveness of corrective and preventive actions, which will also serve as a relatively unbiased and objective source of feedback on the organisation's systems (see Beeler, 1999, p. 76).

## **6.7 The Comprehensive Airline Synergy Audit Model**

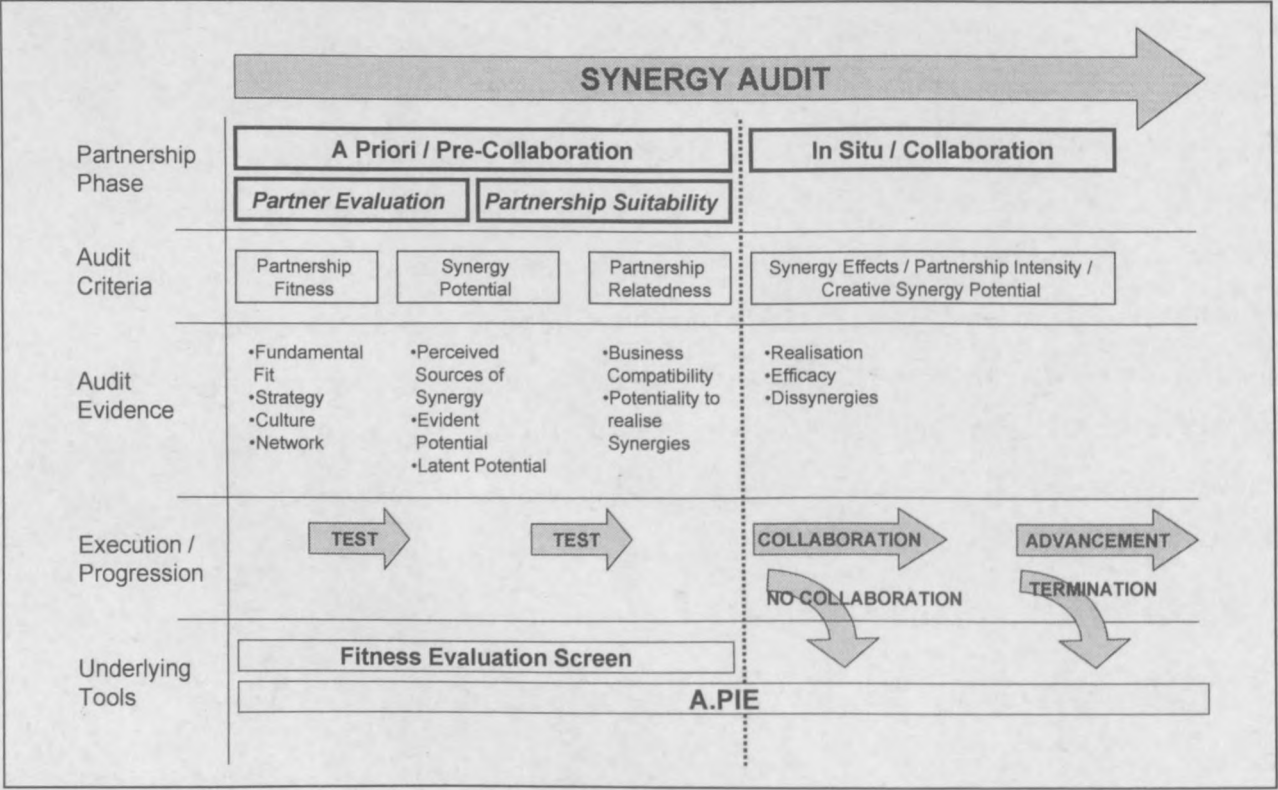
Auditing synergy is neither a one-time task nor is it confined to one particular stage of collaboration. Horizontal partnerships require strategic decisions in favour of partnership action, preparation of the collaboration, partner fitness evaluation, assessment of the collaborative benefits and finally, if required, the winding up of the partnership. All stages are associated with synergy considerations and should be assessed accordingly.

The main requirements of the synergy audit, namely the managerial, organisational and sequential structure and the tool A.PIE, have been defined (see 6.5 and 6.6). Compliance with configurational and organisational principles is of particular relevance to the synergy audit concept. The synergy audit does not stand alone either. It is embedded in the carriers' individual governance organisation and in the partnership's managerial structures. As such, it

receives input from and provides feedback to governance functions (see Karapetrovic and Willborn, 2001).

Figure 6.15 comprehensively illustrates synergy audit in the respective partnership phases, showing the underlying audit criteria (data, against which the auditor compares audit evidence), the corresponding audit evidence (verifiable information) and the employable supporting tools. Interfaces with individual management or partnership management structures are not, however, illustrated.

Figure 6.15: Synergy Audit Model



Source: own overview

The audit approach follows a life-cycle, just as airline partnerships themselves do. The synergy audit accommodates a dynamic orientation by concurrently and recurrently following the stages of preparation, formation, management, advancement and possible termination of the partnership. The figure depicts the synergy audit spanning the summarised phases of pre-collaboration and collaboration. Pre-collaborative synergy audits are primarily concerned with the audit criteria of fitness considerations and assessments of partnership synergy potential. Audit evidence is collected by gathering interairline partnership fitness data. Collaborative motivations and synergy potential are closely related, motivating this phase's objective of formulating and evaluating perceived synergies. Partnership management's original function lies in creatively seeking synergies that go beyond the partnership's standard beneficial



potential. The synergy audit can help to unearth latent synergy potential that could be in line with the restrictions and the intensity level of the collaboration. During the assessment of fitness and business relatedness, synergy potential and fitness criteria are tested against what is expected from the prospective airline partner(s). The results of this synergy audit phase lead to the conclusion to either collaborate or to shed a partner.

Once a collaboration has been concluded, synergy effects become the leading audit criteria. As in situ collaborative synergies correlate with the closeness of the partnership, actual intensity will be scrutinised as well. A further audit criterion at this stage is creative synergy potential. Based on the experience with the ongoing partnership, its intensity could perhaps be increased, and its scope could be widened in order to realise synergetic effects that go beyond the current level. It is important to evaluate evidence of the adequate transformation of synergy potential into synergy effects. However, the efficacy of synergy effects is another aspect of the evidence in this auditing phase. Discrepancies in expected and realised synergies can form the foundation for dissynergies, which will then also be detectable by the audit process. Any partnership should ideally progress by reacting to and anticipating changes in the industry and market environment. A synergy audit should produce the informative basis for the subsequent alliance's development.

In the earliest stages of the partnership, a suitability assessment can be conducted with the aid of a fitness evaluation screen. This tool should ideally apply the fitness categories mentioned above (see 5.3) in order to detect partners' symmetries as well as asymmetries.<sup>145</sup> The fitness evaluation screen thereby compliments the A.PIE device as it is specifically concerned with issues relating to pre-collaborative company relatedness.

A.PIE has been developed as a basic, supporting tool for the entire synergy audit process. It thus applies to every phase of the synergy audit, whereas the focal intention of its usage varies with the auditing stage. Pre-collaboration audit uses A.PIE primarily as a guideline for the range of possibilities of interairline collaboration. Fitness evaluation and the test for business relatedness are supported by A.PIE by comparatively scrutinising suitability along the value chain and its activities. However, A.PIE's most cardinal function occurs in the collaboration phase when both the individual and comparative realisation, of synergies can be examined.

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<sup>145</sup> Fitness categories are: fundamental fitness, strategic fitness, and cultural fitness. See 5.3 for more details.

The tool also allows for the detection of dissynergies, as a synergy antipode, in the partnership.

According to the organisational and hierarchical structure of synergy audit, the results of the audit process have to be made available to the partnership management as well as to the general management for control of subsequent collaboration developments.

## **6.8 Limitations to and Challenges of the Presented Synergy Audit Model**

Though the research results and design of the synergy model are highly indicative of its efficacy, both in theory and in the practice of interairline partnerships, and echo findings of prior research and practical insufficiencies, certain cautions need to be raised. Although the use of synergy and its correlation with partnership intensity as a performance measure provides much needed information regarding the extent to which airline alliances have achieved their overall objectives, the synergy audit is a new model and this implies that there are a few limitations to its application.

Research bias forms a general limitation to any type of research and development of new models or concepts. Research bias pertains to unknown or unacknowledged errors during the design, measurement, sampling, procedure or choice of problems studied. The key difference between qualitative and quantitative scrutiny is that quantitative research attempts to eliminate bias (through representative samples) and that qualitative research explicitly acknowledges bias. This dissertation is primarily qualitative, and is thus generally prone to prejudice in some direction or another (see also research methodology in chapter 1). While the researcher attempted to minimise bias, also by utilising sound scientific approaches, the underlying empirical study, availability of literature and the researcher's own knowledge background cannot guarantee a total elimination of partiality. Judgmental or discretionary accumulation, such as A.PIE's partnership categories, can consequently be particularly inclined towards bias - although unintentionally.

Models regularly only work within the delimitation of the universe to which they have been assigned - only describing issues in line with the scope of the research macrocosm. In practice, models are only applicable to the range of issues they portray. The synergy audit model has been designed in line with this dissertation's research delimitation, i.e. the examination of horizontal passenger airline partnerships. As such, it is thus not envisaged that the audit should be employable in other types of collaboration within the air transport industry, or in entirely different industries.

The audit process itself follows a common auditing scheme, designed to structure the assessment of any type of research matter. For each type of audit, the criteria have to be tested against audit evidence. As is most common in practice, the criteria originate from thorough examinations of the research matter, as well as from empirical data regarding the choice of most suitable and prevalent standards and all derived from the environment (social, industrial, and cultural) in which the audit is conducted. For common, recurring audits such as environmental audits or quality audits, long years of practice have lead to very refined standards regarding the attributes of the audit, the audit's performance and the implementation of the findings.

In the case of the synergy audit, a commonly accepted audit approach has been paired with very specific audit criteria, i.e. synergy. Synergy therefore had to be defined in a way to make it "auditable". This has been achieved by delineating the correlation of partnership intensity and synergy, as well as by describing the specific requirements for partner suitability. The synergy audit thus uses the tools A.PIE and the fitness evaluation screen, which make it unique when compared to standard-type auditing processes. In comparison to standardised environmental or quality audits, the supporting tools of the synergy audit lack industry-specific fine-tuning and level of detail. Although the novelty of the synergy audit has a limiting effect on its application, it does signify that there is potential for improvement and subsequent refinement.

A further practical limitation to the audit lies in its specific organisational demands. The synergy audit requires organisational proficiency and investment for the assessment to be carried out. Obviously, not every allied airline will have the funding, personnel resources and general expertise to operate the audit. With respect to the inter-company organisation of the audit, adequate audit administration needs to be ensured contractually.

In its present stage, the main limitation to the instantaneous applicability of the synergy audit is that the audit has not yet been applied in practice. Applying the synergy audit would entail companies' understanding of the following issues and might necessitate further empirical testing (see N/A, Standards for the Professional Practice of Internal Auditing, 2001):

- Quality assurance and improvement programmes
- Planning of the audit itself
- Resource management
- Reporting guidelines to the board, senior and partnership management



- Monitoring of the process of the auditing
- Documentation of the audit results
- Facilitation, training and advisory services

Notwithstanding these limitations, the findings regarding the synergy concept in interairline partnerships and the development of the synergy audit concept carry useful implications for managerial practice and the body of business science knowledge.

## 6.9 Summary and Implications

Synergy is a term widely used in any type of interrelationship. Its business management connotation is, unlike in many other scientific disciplines, positive in nature and either describes the gainful effects of co-operating businesses within a firm, or the benefits from interfirm linkages. Synergy appears in a context of at least three elements that describe its encouragement, its influencing drivers and its disciplinary morphology. Its delineation in a partnership context is associated with the core motivations to collaborate and thus, habitually, is concerned with benefit potential. Synergy effects, delineating realised synergies, emerge in quantitative and qualitative forms.

Synergy's antipode is dissynergy, which regularly occurs in any form of partnership, although it can take on different forms due to airline linkages' individual characteristics. Dissynergy causes friction among the collaborating parties, disturbs the transformation of synergy effects in synergy potential, binds personnel and ultimately becomes a monetary burden on allies. Dissynergy can be internally- or externally-bred and has to be dealt with, also preventively, by partnership management. Both, synergy and dissynergy are influenced by the intensity of the partnership and the life-cycle phase in which the collaboration operates.

Airlines seek synergistic relationships by entering horizontal linkages. Despite being a transitional instrument on the way to true consolidation, airline partnership formation and management is currently the most important strategic tool in the scheduled air transport industry. With an anticipated industry development ahead, the immanent cyclical evolution and the threatening consequences that imponderable events can inflict on air transportation, strategies that represent a springboard for future survival need to be given the highest priority. Claims to a solid orientation of all aspects of alliance formation, governance and advancements towards a partnership's life-cycle have been made before, therefore carriers are well advised to implement a structured and cautious process for the selection process of partners. Where the range of prospective partners is limited and fast decisions are required,

rapid opportunism and thorough due diligence must be weighed against each other, using a set of evaluating guidelines. In the collaborating phase, airlines do not just need a partnership management practice to control the collaboration and to deal with friction, but also to develop themselves, and to improve the ties that bind partners. Only sufficient flexibility to tackle the perpetual challenges associated with interairline partnerships guarantees ongoing improvement and the fitness to face global industry trends.

Devices and measures that support these priorities are rather the exception than the norm. The reality in airline alliances is that opportunism when selecting partners ignores short-term suitability and long-term fitness components. Partnership management is regularly driven by operatively running the collaboration, which disregards the requirement that the linkage's value should be continuously measured. There is an obvious absence of standardised scales or structured controlling mechanisms with which to evaluate the appropriateness and closeness of the relationship and to provide indications for its improvement. In all, there is a clear deficit of comprehensive tools with which to support interairline partnerships' quest to be an output- and synergy-oriented means to enhance its participants' competitive position.

The paragraphs above have introduced the synergy concept and have described collaborative dissynergies and their particular relevance for horizontal airline partnerships. Based on synergy considerations and the results of the discussion on prerequisites and success factors (chapter 5), a theoretical framework in the form of a circular auditing process was designed, which addresses the challenges of interairline linkages and their current shortcomings.

The airline synergy audit concept is structured and disciplined, the audit categories are clearly defined and its respective resource classes are alluded to. A transparent succession of auditing events outlines the assessment scenario and gives leads as to which tasks, preparative as well as procedural, are to be completed. Selection guidelines by means of a fitness evaluation cover all the requirements for aptly choosing a partner. A fitness evaluation screen as the supporting tool for this premature stage, scrutinises partner suitability in pre-defined categories. The results will either lead to a decision to collaborate or to reject the partner. Prerequisites and success factors as discussed above (see chapter 5), but also the collaborating categories of A.PIE, can provide valuable leads and provide safeguards for a successful configuration of the partnership, operationally as well as managerially.

In the succeeding stage, collaboration is evaluated in situ. By applying the A.PIE model, the overall motivation for collaboration - to achieve synergies - is qualitatively measured through

the intensity of the partnership collaboration. The fact that not partnership width nor exclusively depth, but the resulting intensity of the partnership determines a potentially successful collaboration, can be concluded from the examinations of this chapter. Intensity considerations can begin as early as during the fitness evaluation and can continue virtually until the termination of the linkage. At the same time, the actual and perceived closeness of joint business efforts and the plan-actual comparison provide grounds for the improvement of the collaboration. The synergy audit provides incentives for the perpetual improvement of the collaboration by continuously seeking new, creative areas of partnership benefits in line with the partnership agreement.

The audit framework, comprising tools and methodologies, is dynamic in itself and requires and ideally receives enhancement over time. From a result-oriented perspective, the synergy audit distinguishes between individual and collaborative objectives as well as common advancement goals. This tri-intent approach covers all conceivable spheres in which carriers wish to establish and then optimise their collaborative activities. Feedback of the assessment's results to the partnership management and corporate development can leverage the airline's overall partnership performance. Methodologically more important, however, is the adjustment of the audit process to its own findings and to the ever changing environment.

Applying the synergy audit will assist scheduled passenger carriers to perform the much-required tasks commonly associated with interairline collaboration. It furthermore spans the identified gap in partnership management practice and operation, also by avoiding interairline partnership dissynergies. These tasks, however, can only be completed once airlines understand the strategic importance of their partnership action. Comprehension of the competitive implications should result in a concept of continuously optimising their horizontal ties. This, on the other hand, is only achievable if carriers begin to take note of all possible areas of partnership action in terms of joint revenue generation and cost savings as well as other, more qualitative, objectives.

The way to get there is by fully exploiting the benefit streams of existing collaborative activities and by continuously seeking new alliance areas that promise synergies. As a prerequisite, allied carriers must be willing to share resources and information, they need to be favourably disposed to tapping into formerly untouched collaborative areas and they must be prepared to invest in present and future collaborative activities and the tools and mechanisms that drive them.



## 7 Summary, Conclusions and Recommendations

### 7.1 Summarising Aspects Regarding Airline Collaborations

Airlines join forces horizontally in various types and configurations, with differing intensities to achieve a number of customary, and yet very individual, goals. For quite some time now there has been an *economic need to mitigate the negative effects* of the air transport industry's innate sensitivity to cyclical developments and of its inherent lack of substantial profits. Before deregulation, this requirement did not appear all that acute since many airlines around the world operated under a regime of market protectionism and state subsidies. The change of policy that prompted various countries to liberalise and privatise their air transportation industry and scale down the regulatory barriers under which scheduled carriers could operate, started to *change the pattern of airline competition*. Subsequently, interairline partnerships were induced and identified as *a means through which to redress the industry's inherent frailties as well as through which to weather the challenges of the new air transport rivalry structures and the increasingly deregulated environment*.

However, to some degree the global airline industry is *still regulated*, the exception being the internal/domestic air transportation within integration regions such as the USA and the European Union. A cardinal argument for many forms and instruments of airline partnerships is derived from this *continued regulation and its circumvention* thereof by joining forces horizontally.

Other motivations for collaboration reside in *achieving economic and competitive advantages* as well as in considerations of power, particularly vis-à-vis unaligned competitors and pertaining to those forces that make up the immediate air transport industry environment.

The air transport industry environment, or the competitive landscape in which scheduled passenger airlines operate, has changed drastically in recent years:

- *Travel value chains have been re-organised*, with power shifting away from traditional incumbent configurations. New technologies in the aviation and non-aviation field, as well as the increasing complexity of doing business in an enlarging geographic arena require novel managerial and organisational capabilities from all participants.
- *Customers have been empowered*, they have access to an increasing number of travel product offerings through a wide variety of freely selectable distribution channels, while

simultaneously becoming ever more demanding themselves and therefore less capable of being precisely segmented by the industry.

- The *hub and spoke model of air transport* is being challenged by more time-effective, point-to-point connections.
- *Substitutive land-based travel offerings* and new *communication technologies* influence travel patterns and mandate refined competitive expertise.
- *Cost pressure* in operation and management is ubiquitous and demands the best utilisation of personnel and physical assets. The necessity to *operate with high load factors* and to best manage capacity has never been stronger.
- More recently the proliferation of *low-cost air transport business models* has spurred even further changes in the air transport landscape. Concurrently, these new entrants have internalised some of today's fundamental requirements for successful air transport business.

All aforementioned aspects have called into question the *sustainability of incumbent carriers' current business models* using traditional management approaches and infrastructure. At the same time, the latest developments have given augmented motivational impetus to airline partnership formation in order to jointly fight these competitive threats.

Competing in the present business environment is only one challenge faced by passenger carriers, the other is to face future challenges successfully. The developmental path of passenger air transportation is foreseeable and in many parts of the world already observable. Mirroring other - formerly regulated - industry sectors, *the air transport business is now globalising, liberalising and consolidating* in drastically aggravated competitive circumstances. Airline partnerships clearly play a major role in the continuing rationalisation and eventual consolidation of the air transport industry - both from an industry-economic perspective as well as with regard to capability building within and between individual firms.

Passenger carrier alliances have not only been made possible by occasionally hesitant deregulation, they also *induce further deregulation*. Organisationally, airlines are now becoming more *alliance-sophisticated* and are building important *expertise*. Both these perspectives support the stand that collaborative activities are only an early stage of the inevitable wave of global airline concentration that is to come. Consequently, partnership activities are laying a *foundation for future survival* in even more competitive, truly globalised air transport markets. Interairline alliances are thus not only convenient, but also

necessary vehicles for preparing and facilitating consolidation, which need to counter competitive threats while continuing to accommodate regulative pressures.

This strategic importance mandates solid and lasting interfirm linkages. However, the international airline alliance scene is still *far from a stable and sustainable picture*. In alliance groupings, there are still perceptions of winners and losers, stronger and weaker members, and a continuing evaluation of the threats to and opportunities for individual airlines. Forms and instruments of interairline partnerships are being developed, refined and sometimes rejected, suggesting that horizontal passenger carrier linkages are *in a trial stage*. The remains of the era of regulatory obstructions as well as occasional undetermined market liberalisation impede alliances' development. Airline partnerships fall apart, operate frictionally, mirroring the partners' discontent, or do not produce the desired results. Carriers leave certain groupings and join others, or multilateral partnerships merge - a very plausible scenario as groupings expand.

Airline partnerships suffer from *increased complexity*, which not merely grows with the number of participants, but also with the scope and the depths of interairline collaboration. *Lack of partnership fitness*, often surfacing as a variant of dissimilarities, leads to conflicts and forms another hurdle to establishing effortless partnership operations. The power of soft factors in airline linkages is often not sufficiently taken into account, which produces unwanted and unanticipated diseconomies. Managerially, airlines are under considerable strain to fulfil the multifaceted tasks of partnership ventures. While airline partnerships are claimed to be the *main competitive issue* in today's scheduled air carrier industry, the challenges to achieve satisfactory partnership stability become ever more demanding.

While instability is one drawback of contemporary interairline partnerships, the other main challenge is derived from *the inability to fully realise all potential benefits from joint activities*. Airlines either lack comprehension of the full set of possible partnership benefits, or they focus too narrowly on specific areas, disregarding or undervaluing others. Potentially, there are many more domains in which a partnership can be brought to fruition than is currently being achieved. One, as yet very broad aspect of joint benefit generation, lies in much more extensively realising the gains from *joint activities with positive cost effects*. Although this aspect has been regularly advanced as a core objective of alliance strategies, it has been widely neglected in practice.



In the light of airline collaborations' strategic weight on the one hand, and the obstacles and shortcomings associated with airline partnerships on the other, specific *demands arise regarding member composition, collaborative forms and instruments, administrative concepts and strategic orientations*. Airline partnership management thus becomes a key success factor, not only on a day-to-day, operative basis, but also as far as airlines' corporate strategies are concerned.

In many cases, airlines have failed to establish *adequate collaborative managerial configurations* to deal with the internal organisational and structural challenges, the demands arising from governing relations with the external environment and, more generally, from all of the company's stakeholders. Some airlines do not realise the potential and the future implications of satisfactory partnership management and *many partnership managerial deficiencies have been identified*. Since alliance decisions are often based on pure ad hoc necessity, carriers have been reluctant to place the burden of procedural and governmental tasks - so very vital for lasting and successful partnerships - on their management and organisation. The lack of prescience in managerial practice regarding more intangible issues of firm linkages such as culture, interfirm trust and interpersonal relationships, is another deficiency in today's horizontal partnerships. Often mechanisms that provide platforms for conflict resolution and mediation do not exist. These *managerial inadequacies* naturally impact negatively on performance, leaving the partners unable to fully exploit the desired benefits from the alliance.

A *tremendous need* has been shown for managerial skills in airline partnerships. Alliance management is an *all-embracing qualification that needs to span the entire life-cycle* from the initial decree for partnership formation until the dissolution of the alliance. Partnership design, governance structures and managerial tools need to ascertain that the collaboration's benefits are optimally exploited. Configurational prerequisites must be met in order to mitigate the risk of failure. Although there is no one-size-fits-all approach to airline partnership configuration, prescripts need to be used to actualise success. One particular recommendation is to follow a *structured sequence of events* on the way to closing a partnership agreement.

Some salient concepts of partnership arrangement and management structures, aimed at building airline partnership capabilities within this sequence, have been introduced and discussed (see chapter 5). The foregoing paragraphs thus focused on partnership benefits as

the desired results of alliance activities (see in particular 4.3.2 for motivations for airline co-operations and 6.2 for synergies in airline interrelationships).

A managerial tool - *the synergy audit* - has been developed, filling a gap in airline partnership management, which was identified by studying primary and secondary sources of information (see chapter 6). *The synergy audit assists airlines in detecting and enhancing the gains of their horizontal collaboration, particularly those based on intensity assumptions.* The tool has a dynamic nature in order to accommodate alterations and variety in partnership composition, as well as the tendency towards more consolidated alliance groupings. The synergy audit is only one piece of more far-reaching management concepts. Its core concept, however, is to concentrate on what is so critically required in either loose forms of collaboration or in highly consolidated organisations, namely the overall benefits from horizontal interfirm linkages.

## 7.2 Conclusions, Implications and Outlook

The *research objectives* outlined in the introductory chapter of the dissertation *were achieved.* A *synergy auditing model*, incorporating a multidimensional supporting tool, was developed on the basis of empirical findings and extensive studies of secondary sources of information. Procedurally, the model is workable in different airline-organisational settings and for varying partnership goals. This novel managerial device *enriches both airline management practice and the body of knowledge on interfirm partnership theory.*

Assisting this primary objective, the *secondary objectives were equally well accomplished* by describing and critically discussing the landscape in which airlines currently operate and which strongly induces scheduled passenger carriers to adopt collaborative strategies. These collaborative strategies are built on various highly individual, but also rather standard motivations which, in practice, *emerge as different forms and instruments of airline collaboration.* The foregoing chapters amply elucidated these issues (see in particular chapter 4). As a further secondary objective, *important prerequisites and success factors* embedded in a rational sequence of partnership formation events were introduced (see chapter 5). In this regard secondary objectives were not only necessary to accentuate their issues as such, but they were also highly relevant for the eventual development of the synergy audit model.

An *original contribution* to management science was made by introducing a novel managerial device which is idiosyncratic to the airline industry and based on a thorough evaluation of the stimuli, the types and key success factors or horizontal carrier interrelationships. The synergy audit utilises a unique supportive tool, the A.PIE, which operationalises the synergy-

generating effects of partnership intensity. As such, this dissertation enriches the body of management knowledge and managerial practise in describing the aspects that lead to the formation of carrier partnerships, in outlining specific requirements for their success and in introducing a workable tool to ensure and enhance value creation, from an original perspective.

The *chosen methodology* of mainly qualitative, inductive studies of both primary and secondary sources proved to be appropriate for the purpose of this dissertation. It allowed the building of general partnership management and, more specifically, airline partnership theory. Besides, the *methodology could balance the demands to contribute to the body of knowledge and the requirements to provide solutions to acute problems in real life airline partnerships*. In a similar vein, the methodology supported the development of a workable tool that improves the managerial practice of airline alliance.

*Measures of research quality could be applied* as outlined in the introductory chapter. Content validity, by means of a direct input of knowledgeable sources and triangulation by means of cross checking with other resources, were particularly worthy assurance devices. These quality measures not only allowed valid results to be produced, but furthermore permitted the researcher to be receptive to occasionally contrary findings. While keeping within the limits of the selected research methodology, the *researcher was thus not restrained from drawing his own conclusions* and analytically and creatively seeking new solutions to the research phenomenon.

The presented research could, for the first time, outline salient selection, design and management features of an airline partnership's entire life span. *In short, the structure of the dissertation, its methodology and the final synthesis lead to the accomplishment of the objectives and the development of an acutely needed model.*

In line with the achieved objectives, the *fundamental implications* from scrutinising the passenger airline industry, airline partnerships, their forms and competitive instruments, and proposing a managerial model can, in short, be reduced to the following:

- Scheduled passenger airlines need to better *understand the strategic importance* of alliance formation and its likely evolution.
- Airlines need to more proficiently *exploit the possible benefits* from horizontal collaboration by drawing from a widening partnership scope.



- Airlines need to invest more resources in *setting up adequate partnership management structures* and in tools that assist with the more effective governance of alliances.

Passenger airlines *lack comprehension* of the strategic implications of their partnership behaviour and the momentum and perceivable outcome of the alliance frenzy. With the air transportation business migrating into a globalised economy with changing competitive groupings, carriers need to identify the *current phase of alliance formation as a preparative stage of further consolidation* and, concurrently, as a means to economic survival.

Consolidation will, to a limited degree, appear within established alliance formations. Carriers thus need to utilise their present partnership course, their alliance capabilities as well as their competitive position in an alliance and vis-à-vis other partnerships as a *springboard for further consolidation*. Partnership suitability is therefore both an active attribute - being alliance-sophisticated oneself - and a passive property - being perceived by others to be alliance-sophisticated and, thus, to be a valuable partner.

From an industry perspective, a more *refined re-structuring process of airline partnerships*, also accompanied by rearrangements in the current alliance groupings will appear. A *sharper market segmentation* will surface with an advanced alliance-building phase. Multilateral alliances will incorporate large, senior hub carriers using the services of a range of second tier feeder carriers. In turn, they will be supported by regional carriers providing feeder point-to-point services to secondary hubs. Generally, it is expected that globally operating multilateral alliances will only satisfactorily meet passenger demands for network reach once these alliances incorporate at least one USA carrier. Outside these multilateral alliance constructs an increasing number of low-cost airlines will either operate as independent carriers or as subsidiaries of the large incumbents. Furthermore, *budget airlines will exert considerable competitive pressure* on established incumbents and their alliance formations.

The recent widespread belief that incumbent carriers will consolidate quasi naturally and operate as a group of four to five carriers in a solid oligopoly has to be relinquished. There will certainly be consolidation, but considerations concerning complexity will induce a *cautious approach with regard to a wave of concentration that would create only a few mega-carriers*. Alternative air transport business models will effectively occupy niches in operating certain point-to-point connections, offering dedicated service philosophies ranging from no-frills to top quality, which will rival carrier alliances.

*Critical strategic implications* can be derived from these anticipated developments, both regarding *alliance formation* and *approaches to competition*. Partnering airlines' strategies will need to be more refined to fit into the new competitive structures. Flag carrier strategies, such as operating from a concept of national pride, and offering services to main centres around the world via their hubs, will need to be abandoned in favour of *more selective schemes* in which the alliance's wellbeing receives the highest priority. *Power constellations and governance authority*, particularly in alliances headed by senior hub carriers without capital linkages, must be given detailed attention. Second tier allied carriers and regional carriers will need to shape their appearance and product offerings to best *fill the niche* they occupy and the *position they hold in the alliance*. In most cases, this coincides with giving up costly and complex individual features (FFPs, lounges, IT systems, and others) and economic self-determination in areas such as route development, pricing, and branding in order to accommodate the needs and standards of the overarching partnership.

For all carriers, *partnership formation* can thus either represent a *threat* or an *opportunity* and therefore is, almost always, associated with a number of concerns. Alliances may not benefit each of the members. Second tier carriers may be *particularly vulnerable* in dominant hub strategies where, as smaller partners, they serve as mere regional feeder carriers. Smaller, formerly sovereign and unconstrained flag carriers might have to content themselves with second rank positions in larger alliance formations. These concerns need to be addressed to the benefit of the entire alliance grouping.

Organisational strategies will need to be supplemented by *corporate strategies entailing increased focus on capital markets*. Alliances, their status and development are already touchstones in assessing the financing and capitalisation of carriers, since they must increasingly respond to both the capital requirements of airlines and financing through markets.

There is no doubt that interairline partnerships are built upon efforts to increase revenues, save costs, and circumvent regulative constraints. Practitioners and scholars usually consider the entire economic spectrum of collaborative benefits as a motivation for interairline collaboration. However, evidence suggests that carriers either do *not comprehend the full spectrum of benefits* likely to be achieved, or that airlines concentrate restrictively on selected collaborative benefit areas.

Carrier partnerships are classically constituted on a notion of *joint revenue generation*. Joint marketing activities, market access and sales considerations are unquestionably worthwhile motivations and for many collaborative agreements represent the core *raison d'être* for joining forces. They are, however, only one side of the collaborative spectrum airlines can possibly exploit. Alliance bias will have to move away from a distinct focus on revenue enhancement to *cost reduction* if continuing benefits are to be derived. Indeed, cost considerations played an increasingly important role in single carriers' business models, even before the severe industry crisis of 2001. However, they seem to be paid only lip service when it comes to operating interairline partnerships. Although airlines do feel cost pressure, joint cost reduction ambitions are mostly limited to non-strategic purchasing items. This despite the fact that the market for airline-related services and products is experiencing a competitive struggle as intense as that which airlines themselves are experiencing. Jointly containing and reducing unit costs is still in a very premature stage. If in the light of the increased competitive pressure by budget carriers airlines move away from competing carrier vs. carrier to competing alliance vs. alliance, then the *focus on collaborative unit cost reductions will have to sharpen*.

*Clear and coherent partnership strategies* will require more attention, and the arena of collaborative synergy generation will need to increase in scope. Simultaneously, the *demands on partnership management will mount*. The organisation of management structures, their functionality and the ability to advance with the partnership are currently important subjects. *Managerial capacities need to be equipped with practicability that allows for the adequate selection, design, governance and development of the partnership*. Management needs to be armed with ample tools to managerially accompany, assess and govern the entire partnership life-cycle. Issues such as complexity management, decision- and strategy-making processes in multi-member partnerships, conflict resolution and benefit identification, quantification and allocation, as well as the softer issues of alliances need to be addressed by partnership management. Airline alliance management must additionally pay attention to the developmental path of both the overall evolution of airline collaboration towards more consolidation, and the widening scope of synergy generation. It will consequently have to move to more *unified structures* affecting the configuration and tasks of internal and external or multilateral management bodies.

Currently there seem to be *no supporting tools and methodologies* that allow for the proposal and execution of more targeted partnership management practices. At first this deficiency seems surprising, particularly in view of the competitive advantages associated with



interairline partnership strategies. However, it illustrates both the failure of airlines to internalise the significance of adequate partnership management and the lack of commitment to alliances. The reasons for this can be diverse and range from trust considerations, and appropriation concerns to the somewhat recent loss of confidence in partnering airlines' financial performances.

One recommendation to future horizontal airline partnerships is to abolish these internal hurdles that impede the development of adequate and acutely required alliance management tools. The evolution of the global industry is broadly foreseeable and will *obligate managerial routines that embody best practices which enhance interrelationships' synergy generation* and that address the identified overall frailties of interairline partnerships. In future, partnering airlines will consequently have to employ more structured and elaborate governance devices that sustain operational and strategic leadership. Such tools and their utilisation need to be based on a *sound understanding of the dimensions of key success factors of horizontal partnerships, the partnership's core competencies, and the knowledge of how and where to most optimally unleash interfirm synergies*. One multidimensional tool that could aid partnering airlines to achieve best alliance results was developed and discussed in this dissertation. Tools of this type can assist airline alliances to stay competitive in the current air transport business landscape and will strengthen their position on the way to further consolidation.

### 7.3 Recommendations and Further Research Challenges

Researching strategic airline alliances unveils a multitude of questions, of which a limited selection was dealt with. Hence, from a conceptual and methodological perspective, *further research avenues can and should be examined*.

The immediate importance of contemporary research for practical use and the significance of examining future research questions make it difficult for management researchers to use a single theoretical framework. Increasingly, *researchers need to integrate multiple theoretical and multidisciplinary frameworks* to explain complex international strategic issues to satisfy both current and future research requirements. The following focuses on some significant research demands.

## Primary Recommendations

Primary recommendations are concerned with *further research issues that are directly related to the achievement of the dissertation's primary objective*. In short, these are:

- *Application* of the synergy audit model in *actual cases*
- *Applicability* and *advancement* of the synergy audit model in *other industries and partnership contexts*
- *Quantification* of gains from airline partnerships

Focused on the specific outcome of the dissertation, further research and managerial practice should *comprehensively apply the synergy audit tool* in actual interairline partnership cases. In practice its application assists in unearthing synergy potential and effects not yet realised. As far as the concept and the model's structural content are concerned, applying the model in various different partnership settings leads to the advancement of the model and its components, e.g., A.PIE. Utilising the synergy audit to build theory as in, for instance, longitudinal studies, can yield further domains of knowledge of the field of partnership and interfirm synergy management and, more specifically, of alliance organisational science and strategy process research.

It was stated earlier that the synergy audit model is customised and idiosyncratic to the airline industry. As such, it has *limited applicability* (see 6.8 above for the limitations of the model). However, its causality and its principal structure should *allow a generic usage in other industries and in differently oriented partnerships* as well (e.g. vertical and diagonal alliances, see 4.2.1 and 4.2.2). The underlying objective of striving for partnership synergies is not exclusive to horizontal linkages in the airline industry. Also the key assumption that synergies grow with partnership intensity is a correlation that, at first glance, should likewise be valid in other industry sectors and for different types of collaborations, such as buyer-supplier relationships. The need to utilise such a tool is imperative. Other industries also face problems in their various alliance operations that are similar to the ones discussed, and thus there too the need for effective capabilities in partnership management is crucial. One line of inquiry could build on the *synergy audit's basic structure and apply the concept to other industries and in another collaborative context, while simultaneously developing it*.

Additional research needs to be conducted on the terrain of *quantitative gains of airline partnerships*. Cost-effectiveness has been claimed to develop into a more augmented focus in

airline alliance action. On the other hand, synergies are often *only tangible once quantifiable*. Politically, and to satisfy the needs of all stakeholders, quantifiable results should therefore be produced. The constant control of airline partnerships' productivity needs to be supported by mechanisms both actually evaluating profitability, but also a priori determining the financial gains from prospective partnership action. *Alliance performance metrics* must assist managerial tasks by providing comprehensive information. In this context, a stream of studies could focus on value-based management topics within interairline partnership synergy generation. Strongly related to this complex are research efforts occupied with investment synergies in financing and capitalisation of entire airline partnerships.

### Secondary Recommendations

Secondary recommendations are concerned with *other salient issues in the field of airline partnership operation and management* which need further scrutiny, because there is either a deficiency in current research and/or an acute need for practical expertise. These, in short, need to provide deeper insights into:

- The *dynamic competitive resources* of alliance management and operation
- The *validity of the institutional context* of current airline alliance theory
- The *sustainability* of competitive advantages in alliances
- Partner *selection strategy and metrics*
- Partnership *knowledge management* strategies and tools
- *Information technologies* in interairline relationships
- Development of the *production depths and widths* of single carriers and horizontal alliance formations
- Opportunities for and threats to classic airline alliance transportation by *new competitive forces*

The fluidity of many intercompany partnership issues requires strategy researchers to *keep developing the extant body of knowledge*. Airlines are exposed to new competitive landscapes, constituted by decreasing state control, increasing globalisation, rapid technological changes, re-structured value chains and the emergence of new business models. As airlines compete in global markets, *dynamic competitive resources* develop into crucial assets and carriers' competitive positions become more complex and vigorous. This evolution will continue to pose different, changing questions for airline alliance researchers, who will be increasingly challenged to respond to frequent, discontinuous changes and provide answers to new



competitive and collaborative problems. On the other hand, a number of contemporary airline partnership topics have not been scrutinised to a satisfactory extent. Both the current status of airline alliances and their future development need thorough and, most importantly, ongoing examination, particularly in the fields of *competitive and collaborative strategy*. In fact, the results of continuous airline strategic partnership management research will become increasingly important for current executives and in educating future business leaders, especially in the light of the developments lying ahead.

Generally related to the issue of economic globalisation is the importance of the *institutional context of international research*. There is no theoretical work nor empirical finding suggesting that the existing body of partnership management knowledge, largely obtained in the context of the USA and Europe, is equally applicable in other countries. As airlines globalise, there may be applicability of international theories. However, many airlines operate in confined national or regional boundaries, which applies especially to emerging air transport markets such as Asia. In a similar fashion, airline strategies, organisational structures and governance mechanisms, successfully pursued and implemented in a particular institutional context, may not achieve the same outcomes in another institutional context. *The universality of specific competitive advantages will increasingly be called into question*. More research that acknowledges the institutional differences among geographic or cultural environments is certainly required.

While many theoretical perspectives have significantly advanced the understanding of the sources of airlines' competitive advantages and prerequisites for gainful firm performance, the *sustainability of these competitive advantages* has become an increasingly important question. This is because the new competitive environment forces firms to continue to evaluate the sustainability of their positions. The questions to answer will be whether airline partnership strategies could be worthwhile contemporary competitive tools and, more strategically, whether they could be preparative vehicles for future consolidation. In this regard, a few issues on gaining competitive advantages have already been scrutinised. Other, new fields of collaborative benefits now need to be addressed in order to clarify competitive threats. Among a host of important issues are subjects which presently appear to be critical, such as partner selection, joint knowledge management strategies, alliance IT topics, supplier and/or purchaser relationships and the effects of industry structure and new competitive forces. The basic question to answer will be *what constitutes a true competitive or comparative advantage for interairline partnerships*.

Among those competitive/comparative advantages, *partner selection* certainly plays a key role. Collaborative strategies, especially multilateral network strategies on an international scale, continue to shape the trajectory, nature and pattern of air transport business competition. In the near future and in view of intensifying relationships, airline strategic management researchers will have to pay attention to challenging issues such as the partner selection for an international airline alliance in the context of allies' competencies and their particular culture. Whereas it is foreseeable that airline partnerships will migrate to more concrete and strategic agreements, potentially leading towards consolidation, selection processes need to be more refined, less operative in orientation and need to examine alliance proposals on their specific merits.

*Knowledge management and organisational learning* in strategic airline partnerships have thus far been treated rather cautiously. Organisations are moving away from command and control hierarchies, and towards empowered networks and teams. Technologies to help people communicate are becoming ever more usable and widespread. The need to exchange data, particularly in information-rich industries where companies are interlinked, has become an important part of strategy. Knowledge management is where all these developments meet.

Knowledge management is a term used to describe a raft of approaches, behaviours and tools, which help companies to compete effectively in the information age. *Knowledge is the key to all airlines' success* - for innovation, creativity, flexibility, speed to market, meeting customer needs and working effectively in a global business. Knowledge management is needed to exploit existing knowledge effectively to, for example, learn from past collaborative experience, or access the right expert quickly, and to tap into internal, external and specifically partners' knowledge sources. It is also needed to create new knowledge that enables the organisation to compete more effectively by, for example, discovering new passenger needs and devising services and products to meet them. While many of these issues are of key importance to airlines, knowledge strategies, and sharing expertise outside the confined borders of an individual carrier are the exception rather than the rule. In the light of the further consolidation of passenger airlines, research should focus on this topic and support practitioners with empirical evidence and best practices.

Another important issue that needs to be scientifically clarified to contribute to both theory building and practical application, is *information technology* in airline alliances. From a marketing and passenger service perspective, joint set-up and operation of distribution systems, CRM and passenger handling are major challenges. From an IT viewpoint, the

overall aim must be to treat all alliance customers as if they were customers of the operating carrier, and to extract the most critical passenger information for further joint usage. In a similar vein, IT strategies, and cost savings must be further pursued in interairline partnerships. While these demands seem trivial, the hurdles to achieve an integration of applications are significant. Stagnating IT budgets, little conviction of the urgency of such applications, a shift in priorities and anticipated complexities account for slow adaptation processes. Airlines, particularly, have traditional linkages to GDS providers and rely on individually designed legacy systems that increase the unwillingness to migrate to more collaborative IT strategies. Research should focus on these topics in order to *evaluate, strategize and design future collaborative IT schemes*.

The structure of the industry will change along with the trend to more consolidation, as indicated by the outlook above (see 7.2). New competitive groups will be formed, which will particularly impact on the supplier and airline consumers or purchasers' relationships.

Many other industries already witness extensive *outsourcing of competencies* that were formerly an integral part of the production and innovation process. The airline industry will be no exception. According to their size and market niche coverage, different carrier tiers will provide front-end transport services. In an operational context, functions will be outsourced and new purchasing and equipment operation concepts will be implemented. This concept of big airlines being mere marketing and branding bodies supplemented by a host of differently tiered suppliers has been discussed for some time. With the new competitive scene creating new competitive groups, but also with the availability of new technologies, outsourcing strategies and supplier/purchaser relationships should be further examined and evaluated in the context of interairline alliances.

A final recommendation for further research is to scrutinise particular *players in the new competitive landscape*. New competitive forces have emerged with modern or recently advanced transport modes, such as high-speed rail transport or low-cost airline operators. These time- and cost-effective means of transport pose a significant threat to airline partnerships. Airline partnerships propagate network reach as one of their main competitive advantages to attract and to retain customers. Future research needs to investigate to which extent passengers favour reach and other alliance benefits, such as FFP, above air fare. It is a justifiable question whether low-cost business models could, in highly populated geographies at any rate, turn airline partnership advantages obsolete. It would be as interesting to clarify how very fast rail transport will impact on the development of short-haul, point-to-point and



feeder services. In a more positive context, both presumed threats can equally develop into *opportunities for airline partnerships* which is equally worthwhile scrutinising in coming research.

The mentioned research recommendations could possibly help to shed more light on to both academic and practical topics of airline alliances. In essence, they will assist in applying and complementing this dissertation's findings adequately in order for airline governance to base alliance decisions and partnership operation on a solid set of expertise and a structured managerial toolbox. The combination of new findings - in particular in the field of recently emerged competitive forces surrounding airline partnerships - and the presented research results, will additionally enrich the understanding of how airline alliances will operate in the future and how they will manage to weather the challenges ahead.

Appendix

Appendix A: Questionnaire

Questionnaire/Interview Guideline

Questionnaire No.	
Name of Airline	
Name of Interviewee	
Date/Place of Interview	
Time started	

Questions Regarding Interviewee

1 What is your position in the company?	
---	--

Information Regarding the Sample Airline

2 What is your fleet size? <i>[including leased aircraft]</i>	
3 Please give the total number of employees?	
4 How many destinations does your airline serve? <i>[for the domestic SA market and international routes originating in SA]</i>	
5 What are your airline's key markets and routes? <i>[for the domestic SA market and international routes originating in SA]</i>	
6 Other comments	

Information Regarding Horizontal Partnerships

Details for Horizontal Partnerships

<i>[use columns for different partnerships, max 4]</i>				
7 Which airlines are you having partnerships with and of what nature are these alliances? <i>[only those which are relevant for the SA market, technical and commercial]</i>				
8 For how long have these partnerships been in place?				
9 Which destinations are affected by these partnerships? Please specify.	<input type="checkbox"/> national/reg. <input type="checkbox"/> international <input type="checkbox"/> global	<input type="checkbox"/> national/reg. <input type="checkbox"/> international <input type="checkbox"/> global	<input type="checkbox"/> national/reg. <input type="checkbox"/> international <input type="checkbox"/> global	<input type="checkbox"/> national/reg. <input type="checkbox"/> international <input type="checkbox"/> global
10 Has your airline got any kind of capital investment in the partnering company? What type and level of investment?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
11 Other comments				

Pre-Partnership Planning Issues

12 What did you expect from a business partnership?		
13 How important was the size of the business of the possible partner? <i>[explain scaling]</i>	<div><div><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/></div><div>1 . 2 . 3 . 4 . 5 . 6 . 7 . 8 . 9 . 10</div><div>not important.....very important</div></div>	
14 How important is it, that partners had previous business links with your airline before entering an alliance? Why?	<div><div><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/></div><div>1 . 2 . 3 . 4 . 5 . 6 . 7 . 8 . 9 . 10</div></div>	
15 How important is the business culture of a prospective partner for the choice of that partner and the alliance?	<div><div><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/></div><div>1 . 2 . 3 . 4 . 5 . 6 . 7 . 8 . 9 . 10</div></div>	
<i>[use columns for 2 most important partnerships]</i>		
16 For the following questions please choose the 2 most important partners from your partner portfolio. Why did you choose them and not the other ones?		
17 Which political, economical or other circumstances have supported the formation of the partnership?		
18 What were the first steps taken to get into the partnership?		
19 Who initiated the process of partnership formation?		
20 Did your airline form a special task group to deal with the possible partnership? Why?	<div><input type="checkbox"/> Yes <input type="checkbox"/> No</div>	<div><input type="checkbox"/> Yes <input type="checkbox"/> No</div>
21 Would you say that your airline was inexperienced in the market you intended to enter or extend through your partnership?		
22 How long did it take from the first contact until the alliance went live?		
23 Other comments		



Motivations to Choose a Partner and to Enter a Partnership

Operational and Business-related Motivations

The following deals with motivations to choose a partner and to enter a partnership. If you have more than two partnerships, please select the two most important ones, for which the questions will be asked.	
24 Please state the name of the partner	
25 What were the motivations to enter the partnership initially? [open end question, max 3 min.]	
26 In the following, a choice of possible motivations to enter the partnership will be provided. Please tell how important these motivations were for you. [explain scaling]	<div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div></div> <div>1 . 2 . 3 . 4 . 5 . 6 . 7 . 8 . 9 . 10</div> <div>not important.....very important</div>
<div>• Overcome limited knowledge of the market you have entered</div>	<div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div></div> <div>1 . 2 . 3 . 4 . 5 . 6 . 7 . 8 . 9 . 10</div>
<div>• Overcome limited knowledge of the local business culture in the market</div>	<div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div></div> <div>1 . 2 . 3 . 4 . 5 . 6 . 7 . 8 . 9 . 10</div>
<div>• Overcome limited knowledge of marketing channels</div>	<div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div></div> <div>1 . 2 . 3 . 4 . 5 . 6 . 7 . 8 . 9 . 10</div>
<div>• Overcome limited knowledge of consumer preferences</div>	<div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div></div> <div>1 . 2 . 3 . 4 . 5 . 6 . 7 . 8 . 9 . 10</div>
<div>• Risk reduction for new route development</div>	<div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div></div> <div>1 . 2 . 3 . 4 . 5 . 6 . 7 . 8 . 9 . 10</div>
<div>• Facilitating initial international expansion</div>	<div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div></div> <div>1 . 2 . 3 . 4 . 5 . 6 . 7 . 8 . 9 . 10</div>
<div>• Facilitating initial national or regional expansion</div>	<div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div></div> <div>1 . 2 . 3 . 4 . 5 . 6 . 7 . 8 . 9 . 10</div>
<div>• Slot sharing opportunities at congested airports</div>	<div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div></div> <div>1 . 2 . 3 . 4 . 5 . 6 . 7 . 8 . 9 . 10</div>
<div>• Access to new markets by tapping a partner's unutilised route rights or unused slots</div>	<div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div></div> <div>1 . 2 . 3 . 4 . 5 . 6 . 7 . 8 . 9 . 10</div>
<div>• Shared costs and economies of scale through the pooling of resources across the following operational areas or cost centres such as</div>	
<div>• (...) sales</div>	<div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div></div> <div>1 . 2 . 3 . 4 . 5 . 6 . 7 . 8 . 9 . 10</div>
<div>• (...) marketing</div>	<div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div></div> <div>1 . 2 . 3 . 4 . 5 . 6 . 7 . 8 . 9 . 10</div>
<div>• (...) check-in and ground handling facilities</div>	<div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div></div> <div>1 . 2 . 3 . 4 . 5 . 6 . 7 . 8 . 9 . 10</div>

<div>• (...) joint usage of aircraft</div>	<div><div><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></div><div>1 . 2 . 3 . 4 . 5 . 6 . 7 . 8 . 9 . 10</div></div>
<div>• (...) purchasing</div>	<div><div><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></div><div>1 . 2 . 3 . 4 . 5 . 6 . 7 . 8 . 9 . 10</div></div>
<div>• (...) joint negotiation of insurance rates</div>	<div><div><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></div><div>1 . 2 . 3 . 4 . 5 . 6 . 7 . 8 . 9 . 10</div></div>
<div>• How important was the motivation to jointly promote your alliance's services initially?</div>	<div><div><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></div><div>1 . 2 . 3 . 4 . 5 . 6 . 7 . 8 . 9 . 10</div></div>
<div>• Joint pricing</div>	<div><div><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></div><div>1 . 2 . 3 . 4 . 5 . 6 . 7 . 8 . 9 . 10</div></div>
<div>• Schedule integration</div>	<div><div><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></div><div>1 . 2 . 3 . 4 . 5 . 6 . 7 . 8 . 9 . 10</div></div>
<div>• Joint maintenance</div>	<div><div><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></div><div>1 . 2 . 3 . 4 . 5 . 6 . 7 . 8 . 9 . 10</div></div>
<div>• Technology exchange</div>	<div><div><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></div><div>1 . 2 . 3 . 4 . 5 . 6 . 7 . 8 . 9 . 10</div></div>
<div>• Traffic feed and de-feed into established gateways</div>	<div><div><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></div><div>1 . 2 . 3 . 4 . 5 . 6 . 7 . 8 . 9 . 10</div></div>
<div>• Defence of current markets</div>	<div><div><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></div><div>1 . 2 . 3 . 4 . 5 . 6 . 7 . 8 . 9 . 10</div></div>
<div>• Management of seat capacity of shared operations</div>	<div><div><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></div><div>1 . 2 . 3 . 4 . 5 . 6 . 7 . 8 . 9 . 10</div></div>
<div>• Advancing organisational knowledge</div>	<div><div><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></div><div>1 . 2 . 3 . 4 . 5 . 6 . 7 . 8 . 9 . 10</div></div>
<div>• Increased market status and passenger awareness</div>	<div><div><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></div><div>1 . 2 . 3 . 4 . 5 . 6 . 7 . 8 . 9 . 10</div></div>
<div>• Overcome government-mandated trade or investment barriers</div>	<div><div><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></div><div>1 . 2 . 3 . 4 . 5 . 6 . 7 . 8 . 9 . 10</div></div>
<div>• Computer Reservation System benefits</div>	<div><div><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></div><div>1 . 2 . 3 . 4 . 5 . 6 . 7 . 8 . 9 . 10</div></div>
<div>• Being part of a broader, e.g. global, alliance network</div>	<div><div><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></div><div>1 . 2 . 3 . 4 . 5 . 6 . 7 . 8 . 9 . 10</div></div>
<div>• Circumvent limitations by bilateral agreements</div>	<div><div><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></div><div>1 . 2 . 3 . 4 . 5 . 6 . 7 . 8 . 9 . 10</div></div>
<div>27 Did any further motivations come up while being involved in the partnership? Please name them.</div>	<div><div><input type="checkbox"/> Yes</div><div><input type="checkbox"/> No</div></div>
<div>28 Other comments</div>	

Passenger-related Motivations

29 Please name the most important passenger related advantages to form an alliance. <i>[open end, max. 3 min.]</i>	
30 In the following, a choice of possible motivations to enter the alliance to improve passenger benefits will be provided. Please tell how important these motivations were for you. <i>[explain scaling]</i>	<div><div><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/></div><div>1 . 2 . 3 . 4 . 5 . 6 . 7 . 8 . 9 . 10</div><div>not important.....very important</div></div>
<div><div>•</div><div>Shorten travel time</div></div>	<div><div><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/></div><div>1 . 2 . 3 . 4 . 5 . 6 . 7 . 8 . 9 . 10</div></div>
<div><div>•</div><div>Reciprocal Frequent Flyer Programme participation</div></div>	<div><div><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/></div><div>1 . 2 . 3 . 4 . 5 . 6 . 7 . 8 . 9 . 10</div></div>
<div><div>•</div><div>Ticketing advantages</div></div>	<div><div><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/></div><div>1 . 2 . 3 . 4 . 5 . 6 . 7 . 8 . 9 . 10</div></div>
<div><div>•</div><div>Baggage handling advantages</div></div>	<div><div><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/></div><div>1 . 2 . 3 . 4 . 5 . 6 . 7 . 8 . 9 . 10</div></div>
<div><div>•</div><div>Liability advantages [the carrier issuing the travel document is responsible vis-à-vis the passenger for the entire journey]</div></div>	<div><div><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/></div><div>1 . 2 . 3 . 4 . 5 . 6 . 7 . 8 . 9 . 10</div></div>
<div><div>•</div><div>Offering extended route networks</div></div>	<div><div><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/></div><div>1 . 2 . 3 . 4 . 5 . 6 . 7 . 8 . 9 . 10</div></div>
31 Other comments	



Organisation of the Partnership

32 Did you check your partner for business compatibility? Which set of criteria did you use? [strategic fit, cultural fit]	<input type="checkbox"/> Yes <input type="checkbox"/> No
33 Was your partnership contract or agreement subject to a time limit? Why?	<input type="checkbox"/> Yes <input type="checkbox"/> No
34 Are there any details on termination procedures in the partnership contract or agreement? What do they specify?	<input type="checkbox"/> Yes <input type="checkbox"/> No
35 Is it important that number of partners in an alliance is limited? If Yes, why?	<input type="checkbox"/> Yes <input type="checkbox"/> No
36 In the following, a choice of possible reasons to limit the number of partners in an alliance will be provided. Please tell how important these reasons are for you. [explain scaling]	<div><div><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/></div><div>1 . 2 . 3 . 4 . 5 . 6 . 7 . 8 . 9 . 10</div><div>not important.....very important</div></div>
<div>• Organisational constraints</div>	<div><div><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/></div><div>1 . 2 . 3 . 4 . 5 . 6 . 7 . 8 . 9 . 10</div></div>
<div>• Difficulties in managing the complexity of the partnership</div>	<div><div><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/></div><div>1 . 2 . 3 . 4 . 5 . 6 . 7 . 8 . 9 . 10</div></div>
<div>• Limited availability of partners</div>	<div><div><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/></div><div>1 . 2 . 3 . 4 . 5 . 6 . 7 . 8 . 9 . 10</div></div>
<div>• Competition among alliances or networks respectively</div>	<div><div><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/></div><div>1 . 2 . 3 . 4 . 5 . 6 . 7 . 8 . 9 . 10</div></div>
<div>• Loss of control over company destiny</div>	<div><div><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/></div><div>1 . 2 . 3 . 4 . 5 . 6 . 7 . 8 . 9 . 10</div></div>
<div>• Difficulties in rationalising operations</div>	<div><div><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/></div><div>1 . 2 . 3 . 4 . 5 . 6 . 7 . 8 . 9 . 10</div></div>
<div>• Limited positive effects through number of partners</div>	<div><div><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/></div><div>1 . 2 . 3 . 4 . 5 . 6 . 7 . 8 . 9 . 10</div></div>
37 Did your company organisation change because of your business partnership? How?	<input type="checkbox"/> Yes <input type="checkbox"/> No
38 Other comments	

Governance Structure of the Partnership

39 Has your airline got an alliance management department?	<input type="checkbox"/> Yes <i>[go to 40]</i> <input type="checkbox"/> No <i>[go to 43]</i>
40 <i>[If Yes above]</i> Is your alliance management department centralised or decentralised and how is it structured?	<input type="checkbox"/> Centralised <input type="checkbox"/> Decentralised
41 On which hierarchy level is the head of alliance management situated and who does he/she report to?	
42 By which criteria do you choose alliance management staff?	
43 <i>[if No above]</i> Who is dealing with alliance issues?	
44 Are any mechanisms in place to adjust alliance goals of the partnership to the changing environment?	
45 How does your airline ensure that its resources and intellectual capital (technical, know-how, human) are protected and remain its property?	
46 How has your airline learnt from its partner?	
47 Has newly learnt knowledge ever been applied? How?	<input type="checkbox"/> Yes <input type="checkbox"/> No
48 Do you see any managerial imbalances between the partners of your alliance? Please describe.	<input type="checkbox"/> Yes <input type="checkbox"/> No
49 Which of the partners is controlling the alliance? Please state the name of the partner out of the above-mentioned partnerships.	
50 Do you run any special training programmes with your staff to ensure their support for alliance issues? Please specify.	<input type="checkbox"/> Yes <input type="checkbox"/> No
51 How do you promote the alliance in your company? <i>[magazines, staff letters or meetings, etc.]</i>	
52 Other comments	

Information Regarding the Alliance Performance

Business Accomplishments

The following deals with alliance performance issues. If you have more than two partnerships, please select the two most important ones, for which the questions will be asked.	
53 Please state the name of the partner.	
54 Did the alliance performance a. meet, b. exceed, or c. disappoint your expectations?	<input type="checkbox"/> a. <input type="checkbox"/> b. <input type="checkbox"/> c.
55 Can you determine the financial benefits achieved by the alliance? How?	<input type="checkbox"/> Yes <input type="checkbox"/> No
56 Did you experience any increase in costs through your alliance? [ <i>friction costs, transaction costs, control costs</i> ] Please describe.	<input type="checkbox"/> Yes <input type="checkbox"/> No
57 Do you use any controlling system to track the success of the alliance [ <i>financial, statistical, strategy</i> ]? What are its components?	<input type="checkbox"/> Yes [ <i>go to 59</i> ] <input type="checkbox"/> No
58 If No, what prevents you from tracking the benefits?	
59 Do you use any mechanism to control service and safety standards of your partner? Please specify.	<input type="checkbox"/> Yes <input type="checkbox"/> No
60 Please name the key success factors for your alliance.	
61 Where do you see your key resources and strengths that you brought to the partnership?	
62 Where do you see your weaknesses?	
63 How important is the success of the alliance for the success of your company? [ <i>explain scaling</i> ]	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> 1 . 2 . 3 . 4 . 5 . 6 . 7 . 8 . 9 . 10 not important.....very important
64 How did the alliance change over time?	
65 Other comments	



Partnership Conflicts and Synergies

The following deals with partnership conflicts and synergies. If you have more than two partnerships, please select the most significant one, for which the questions will be asked.	
66 Please state the name of the partner.	
67 Which problems have been experienced initially in your alliance? <i>[open end, max. 3 min.]</i>	
68 In the following, a choice of possible problems you could have experienced in your alliance initially will be provided. Please tell how serious these problems were for you. <i>[explain scaling]</i>	<div><div><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/></div><div>1 . 2 . 3 . 4 . 5 . 6 . 7 . 8 . 9 . 10</div><div>not serious.....very serious</div></div>
<div>• Difficulties to find an appropriate partner</div>	<div><div><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/></div><div>1 . 2 . 3 . 4 . 5 . 6 . 7 . 8 . 9 . 10</div></div>
<div>• Problems to initially make contact with partner</div>	<div><div><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/></div><div>1 . 2 . 3 . 4 . 5 . 6 . 7 . 8 . 9 . 10</div></div>
<div>• Negotiation problems</div>	<div><div><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/></div><div>1 . 2 . 3 . 4 . 5 . 6 . 7 . 8 . 9 . 10</div></div>
<div>• Cultural problems amongst partners</div>	<div><div><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/></div><div>1 . 2 . 3 . 4 . 5 . 6 . 7 . 8 . 9 . 10</div></div>
<div>• Managerial problems</div>	<div><div><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/></div><div>1 . 2 . 3 . 4 . 5 . 6 . 7 . 8 . 9 . 10</div></div>
69 Which problems have been experienced over time? <i>[open end, max. 3 min.]</i>	
70 In the following, a choice of possible problems you could have experienced in your alliance over time will be provided. Please tell how serious these problems were for you. <i>[explain scaling]</i>	<div><div><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/></div><div>1 . 2 . 3 . 4 . 5 . 6 . 7 . 8 . 9 . 10</div><div>not serious.....very serious</div></div>
<div>• Contrasting corporate cultures</div>	<div><div><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/></div><div>1 . 2 . 3 . 4 . 5 . 6 . 7 . 8 . 9 . 10</div></div>
<div>• Negotiation problems</div>	<div><div><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/></div><div>1 . 2 . 3 . 4 . 5 . 6 . 7 . 8 . 9 . 10</div></div>
<div>• Time horizons not being met</div>	<div><div><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/></div><div>1 . 2 . 3 . 4 . 5 . 6 . 7 . 8 . 9 . 10</div></div>
<div>• Organisational and managerial problems</div>	<div><div><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/></div><div>1 . 2 . 3 . 4 . 5 . 6 . 7 . 8 . 9 . 10</div></div>
<div>• Expectations not being met</div>	<div><div><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/></div><div>1 . 2 . 3 . 4 . 5 . 6 . 7 . 8 . 9 . 10</div></div>
<div>• Unbalanced standards of service</div>	<div><div><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/></div><div>1 . 2 . 3 . 4 . 5 . 6 . 7 . 8 . 9 . 10</div></div>
<div>• Schedule integration conflicts</div>	<div><div><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/></div><div>1 . 2 . 3 . 4 . 5 . 6 . 7 . 8 . 9 . 10</div></div>
<div>• Management style difficulties</div>	<div><div><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/></div><div>1 . 2 . 3 . 4 . 5 . 6 . 7 . 8 . 9 . 10</div></div>

• Problems with sharing of financial benefits	<div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div></div> <div>1 . 2 . 3 . 4 . 5 . 6 . 7 . 8 . 9 . 10</div>
• Problems with governmental regulation	<div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div></div> <div>1 . 2 . 3 . 4 . 5 . 6 . 7 . 8 . 9 . 10</div>
• Incompatibility of IT systems	<div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div></div> <div>1 . 2 . 3 . 4 . 5 . 6 . 7 . 8 . 9 . 10</div>
• Difficulties with marketing strategies	<div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div></div> <div>1 . 2 . 3 . 4 . 5 . 6 . 7 . 8 . 9 . 10</div>
• Problems with business processes	<div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div></div> <div>1 . 2 . 3 . 4 . 5 . 6 . 7 . 8 . 9 . 10</div>
• Human resources conflicts	<div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div></div> <div>1 . 2 . 3 . 4 . 5 . 6 . 7 . 8 . 9 . 10</div>
• Over-dependence on the alliance	<div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div></div> <div>1 . 2 . 3 . 4 . 5 . 6 . 7 . 8 . 9 . 10</div>
• Decision-making speed	<div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div></div> <div>1 . 2 . 3 . 4 . 5 . 6 . 7 . 8 . 9 . 10</div>
• Increase in costs	<div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div></div> <div>1 . 2 . 3 . 4 . 5 . 6 . 7 . 8 . 9 . 10</div>
• Difficulties with sales teams <i>[little acceptance of shared product]</i>	<div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div></div> <div>1 . 2 . 3 . 4 . 5 . 6 . 7 . 8 . 9 . 10</div>
• Passenger complaints	<div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div></div> <div>1 . 2 . 3 . 4 . 5 . 6 . 7 . 8 . 9 . 10</div>
71 Which kind of passenger complaints did you receive?	
72 Did you ever receive passenger complaints concerning the following?	<div><div><input type="checkbox"/> Check-in procedures</div><div><input type="checkbox"/> Baggage handling procedures</div><div><input type="checkbox"/> Frequent-Flyer-Programme issues</div><div><input type="checkbox"/> Passenger deception <i>[flying with different carrier than booked; codeshare]</i></div></div>
73 Do you see a threat to the partnership by passenger complaints? Why?	<div><div><input type="checkbox"/> Yes</div><div><input type="checkbox"/> No</div></div>
74 Which further problems in your partnership would come to your mind?	
75 Which managerial approaches were used to tackle the problems?	

76 Please name the 3 most important benefits <i>[synergies]</i> you see in your alliance.	1. 2. 3.
77 Did any unexpected benefits <i>[synergies]</i> evolve?	
78 What would be the reason for you to break up the alliance?	
79 What would you fear to loose in the case of a break-up? <i>[intellectual capital, human resources]</i>	
80 How do you rate the threat by other alliances/networks? <i>[explain scaling]</i>	<div><div><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/></div><div>1 . 2 . 3 . 4 . 5 . 6 . 7 . 8 . 9 . 10</div><div>low.....very high</div></div>
81 Where do you see the competitive advantage of your alliance?	
82 The following gives you two different options of general areas, where competitive advantage is generated by the alliance. Please rate them. <i>[explain scaling]</i>	<div><div><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/></div><div>1 . 2 . 3 . 4 . 5 . 6 . 7 . 8 . 9 . 10</div><div>not important.....very important</div></div>
• Advantages for the alliance as a whole <i>[inter-alliances]</i>	<div><div><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/></div><div>1 . 2 . 3 . 4 . 5 . 6 . 7 . 8 . 9 . 10</div></div>
• Advantages of single members in the network <i>[intra-alliances]</i>	<div><div><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/></div><div>1 . 2 . 3 . 4 . 5 . 6 . 7 . 8 . 9 . 10</div></div>
83 Other comments	

Remarks:

Time end	
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**Appendix B: A.PIE – Intensity Continuum**

	No Co-operation	Industry-organised collaboration	Operative Agreements / Share Experience	Marketing Collaboration	Decision Alignment	Formalised Co-operation	Work Sharing / Strategic Co-operation	Standardisation	Shared Services	Common Control / Concentration
	1	2	3	4	5	6	7	8	9	10
Partnership Structure	no co-operation	interline agreement / IATA	pool agreement	interchange / blocked space / prorated agreement / SPA	marketing arrangement / GSA	selected codeshare	comprehensive codeshare / ffp / multilateral network	umbrella brand	franchise / financial involvement	fully owned subsidiary / merger / antitrust immunity / superbrand
Primary Functions										
Procurement and Finance	no co-operation	-	share experience in procurement	-	co-operation / some joint purchasing	some joint IT projects / some joint development	work sharing / common development	common IT in selected areas	-	common, integrated purchasing administration
	no co-operation	-	share experience	-	some joint purchasing	joint B2B	work sharing	selective joint purchasing	shared services	common, integrated purchasing administration
Purchasing of Strategic Input Factors										
Fleet Planning / Purchasing / Co-ordination	no co-operation	-	share experience	-	limited fleet co-ordination	-	common strategies for parts of the fleet / sharing of fleet plans and capacity	-	shared services	common control / common purchasing administration / joint fleet planning

	No Co-operation	Industry-organised collaboration	Operative Agreements / Share Experience	Marketing Collaboration	Decision Alignment	Formalised Co-operation	Work Sharing / Strategic Co-operation	Standardisation	Shared Services	Common Control / Concentration
	1	2	3	4	5	6	7	8	9	10
Ground Operations	Quantitative Intensity			-	co-operation / some co-ordination	-	work sharing / staff rotation	-	shared services / commonly outsourced services	common control / entirely joint services
	Operations Control		share experience							
	Ground Operations	-	share experience	-	co-operation	consolidation of handling services	work sharing / staff rotation	common standards	shared services / common facilities / common resources / common outsourcing	common control / common resources / common outsourcing strategy
	Airport Facilities	-	share experience	-	some joint, selective airport facilities / counters	-		joint planning / joint lounges / counters	common outsourcing	shared and integrated facilities, joint terminals, airport investments
Maintenance / Technical Operation	MRO	e.g. IATP	share experience	-	joint purchasing of outsourced services	-	work sharing / selected joint maintenance	joint overhaul maintenance, joint non-partnership maintenance	joint maintenance strategies / joint outsourcing	common line maintenance / overhaul maintenance / engine maintenance
	Spares, Service Purchasing	-	share experience	-	joint procurement of selected items	joint B2B		-	joint procurement	common negotiation and procurement / warehousing / financing



	No Co-operation	Industry-organised collaboration	Operative Agreements / Share Experience	Marketing Collaboration	Decision Alignment	Formalised Co-operation	Work Sharing / Strategic Co-operation	Standardisation	Shared Services	Common Control / Concentration
	1	2	3	4	5	6	7	8	9	10
Flight Operations	Quantitative Intensity	-	-	limited routes	-	parallel trunk route operation	certain markets / main O&D	most regions	shared services / high O&D penetration	fully integrated and comprehensive
	Destinations Affected / Geographic Restriction (Network Width)	-	-	-	50% availability	-	-	-	-	full availability
	Frequencies Available for Partnership / Available Inventory (Network Depth)	-	-	-	schedule co-ordination point-to-point	-	joint destinations / connectivity planning / some O&D	-	shared services / most O&D	fully integrated schedules
	Schedule Development / Planning	-	route specific shared experience	-	-	-	-	-	shared services	multiple hub structures / common "fortress hub"
Passenger Service / Product	Network Structure	-	share experience	-	single hub structure	-	-	-	shared services	common resources and standards / common outsourcing strategy
	Passenger Handling (Pre-flight, Post-flight), Check-in, Check-out	-	share experience	-	selected joint check-in / gate facilities / co-ordination	-	home carrier operates check-in and gate services	joint lounges	shared services / common facilities	common standards / common outsourcing strategy
	Inflight	-	share experience	-	some alignment on selected flights	co-ordination	joint design, yet individual, of service offers	-	high service similarity	common standards / same service

		No Co-operation	Industry-organised collaboration	Operative Agreements / Share Experience	Marketing Collaboration	Decision Alignment	Formalised Co-operation	Work Sharing / Strategic Co-operation	Standardisation	Shared Services	Common Control / Concentration
		1	2	3	4	5	6	7	8	9	10
	Quantitative Intensity										
Marketing / Sales / Distribution	Marketing Operations and Strategy	no co-operation	-	share experience	-	co-operation / joint marketing for selected markets	co-ordination of marketing efforts	joint advertising guidelines / targeted communication	-	home market principle / full joint advertising / umbrella brand	common marketing strategy / superbrand
	Branding	no co-operation	-	share experience	-		joint brand guidelines	separate brands / brand linkage	umbrella brand	superior umbrella brand	common brand / superbrand
	FFP	no co-operation	-	share experience	-	mileage accrual and redemption on selected flights	reciprocal FFP co-ordination / geographically confined	reciprocal acceptance of status miles / common IT	data sharing	integrated FFP / harmonised procedures	common FFP / superbrand / joint databases
	ALP/CLP	no co-operation	-	share experience	-	some joint, yet confined collaboration	-	common IT	joint programme	integrated ALP/CLP / harmonised procedures / joint database access	fully integrated / one common scheme
	CRS	no co-operation	-	share experience	-	CRS linkages / middleware	-	passenger CRS data exchange / MIDT exchange	-	-	common CRS / common CRS data procession
	Sales Teams	no co-operation	-	share experience	-	co-operation / shared, confined market intelligence	joint sales efforts / geographically confined	-	allocation of lead sales responsibility / sales management in each country	-	common sales force / call centres / e-commerce
	Online Distribution	no co-operation	-	share experience	-	common e-distributions systems	-	-	multi-carrier online travel portal (independent)	joint multilateral alliance travel portal	superbrand travel portal
	Yield Management	no co-operation	-	share experience	blocked space yield management	-	codesharing / optimisation / route specific	real time yield management	common capacity control / selected data exchange	comprehensive optimisation	integrated and centralised administration / common control / common platform
	Pricing	no co-operation	-	share experience	-	exchange of O&D pricing data	-	selected pricing	-	-	comprehensive joint pricing

	No Co-operation	Industry-organised collaboration	Operative Agreements / Share Experience	Marketing Collaboration	Decision Alignment	Formalised Co-operation	Work Sharing / Strategic Co-operation	Standardisation	Shared Services	Common Control / Concentration
	1	2	3	4	5	6	7	8	9	10
Quantitative Intensity										
Secondary Functions General Management										
	no co-operation	-	route specific share experience	limited co-ordination	co-operation	selected definition of joint network areas	formalisation of partnership strategic planning	unification of strategic processes / business plan performance measures / supplier policy	multilateral independent management (external)	singular concentrated management internal / external
	no co-operation	-	share experience	-	CEO committee / monthly management meetings / project-oriented	-	independent companies / no fully integrated business plan / stronger institutionalisation of committees	joint management structures / management exchange / job rotation	common management functions / long contract termination period	permanent assignment / fully autonomous management
	no co-operation	-	share experience	-	co-ordinated systems	-	work sharing / common tools	common standards	shared services	common administration / common strategies
	no co-operation	-	share experience	-	aligned procedures	-	exchange of information	common standards	shared services	integrated systems / common platform / common control
Personnel Management	no co-operation	-	share experience	-	-	joint training	staff rotation / sharing	-	recruitment co-ordination	common recruitment and employment strategies



## List of References

### Articles in Journals and Magazines

- Abeyratne, Ruwantissa I. R.: Would Competition in Commercial Aviation ever Fit into the World Trade Organization?, *Journal of Air Law and Commerce*, 1996, Vol. 61, No. 4, pp. 793-857
- Albach, Horst: Strategische Allianzen, strategische Gruppen, strategische Familien, *Zeitung für Betriebswirtschaft*, 1992, 62. Jg., Heft 6, pp. 663-670
- Antoniou, Andreas: The Air Transport Policy of Small States: Meeting the Challenges of Globalization, *Journal of Air Transportation World Wide*, 2001, Vol. 6, No. 2, pp. 65-92
- Applegate, Dennis B.: Best Practices in Joint Venture Audits, *Internal Auditor*, 1998, April, Vol. 55, No. 2, pp. 50-54
- Ariño, Africa; Torre, José de la: Learning from Failure: Towards an Evolutionary Model of Collaborative Ventures, *Organization Science*, 1998, May-June, Vol. 9, No. 3, pp. 306-325
- Azoulai, René: A New Battleground for the Airline's Commercial Success, *Interavia Business & Technology*, 2000, April, Vol. 55, No. 641, pp. 9-12
- Backhaus, Klaus; Meyer, Margit: Strategische Allianzen und strategische Netzwerke, *Das Wirtschaftsstudium*, 1993, Juli, Heft 7, pp. 330-334
- Backhaus, Klaus; Piltz, Klaus: Strategische Allianzen - eine neue Form kooperativen Wettbewerbs?, *Zeitung für betriebswirtschaftliche Forschung*, 1990, Sonderheft 27/90, pp. 1-10
- Bailey, Elizabeth E.; Baumol, William J.: Deregulation and the Theory of Contestable Markets, *Yale Journal on Regulation*, 1984, Vol. 1:111, p. 128
- Baker, Colin: Behind the Handshake, *Airline Business*, 2001, February, Vol. 17, No. 2, pp. 66-68
- Baker, Colin: Olympic Hunts for New Suitors after the BA Management Relationship Ends, *Airline Business*, 2000, July, Vol. 16, No. 7, p. 21
- Baker, Colin: Return to Growth, *Airline Business*, 2000, June, Vol. 16, No. 6, pp. 56-66
- Baker, Colin: Slow Shuffle, *Airline Business*, 2000, December, Vol. 16, No. 12, pp. 68-69

- Baker, Colin: The Global Groupings, *Airline Business*, 2001, July, Vol. 17, No. 7, pp. 42-45
- Baker, Colin; Field, David: Jumping the Tracks, *Airline Business*, 2001, June, Vol. 17, No. 6, pp. 106-108
- Barkin, Thomas I.; Hertzell, Staffan O.; Young, Stephanie J.: Facing Low-Cost Competitors: Lessons from US Airlines, *The McKinsey Quarterly*, 1995, No. 4, pp. 86-99
- Barringer, Bruce R.; Harrison, Jeffrey S.: Walking a Tightrope: Creating Value through Interorganizational Relationships, *Journal of Management*, 2000, Vol. 26, No. 3, pp. 367-404
- Barton, Clive; Bradshaw, Lar; Brunschwiler, Remo; Bull-Larsen, Thomas: Is there a Future for Europe's Airlines?, *The McKinsey Quarterly*, 1994, No. 4, pp. 29-41
- Beeler, DeWitt L.: Internal Auditing: The Big Lies, *Quality Progress*, 1999, May, Vol. 32, No. 5, pp. 73-79
- Beirne, Mike: Code Red for Airline Brands?, *Brandweek*, 1999, 07.12.99, Vol. 40, No. 28, pp. 22-27
- Bell, Michael: Buyer Beware of the Human Element, *Airline Business*, 2000, July, Vol. 16, No. 7, pp. 106
- Bennet, Peter: Taking on the World, *Airline Business*, 1999, December, Vol. 15, No. 12, pp. 46-48
- Berardino, Frank; Frankel, Chris: Alliances: The Next Step, *Airline Business*, 1998, October, Vol. 14, No. 10, pp. 68-71
- Berardino, Frank; Frankel, Chris: Keeping Score, *Airline Business*, 1998, September, Vol. 14, No. 9, pp. 82-87
- Berryman, Kenneth; Harrington, Lorraine; Layton-Rodin, Dennis; Rerolle, Vincent: Electronic Commerce: Three Emerging Strategies, *The McKinsey Quarterly*, 1998, No. 1, pp. 152-159
- Bhagwanani, Ravindra: Keeping the High Flyers, *Airline Business*, 2000, June, Vol. 16, No. 6, pp. 88-93
- Bierck, Richard: Synergy, *Harvard Management Communication Letter*, 1999, August, Vol. 2, No. 8, p. 9

- Birnberg, Jacob G.: Control in Interfirm Co-operative Relationships, *Journal of Management Studies*, 1998, July, Vol. 35, No. 4, pp. 421-428
- Bissessur, Abhimanyu; Alamdari, Fariba: Factors Affecting the Operational Success of Strategic Airline Alliances, *Transportation Journal*, 1998, November, Vol. 38, No. 4, pp. 331-355
- Bittner, Andreas: Der Umgang mit fremden Kulturen, *Gabler's Magazin*, 1996, Vol. 10, No. 2, pp. 14-19
- Bleeke, Joel; Ernst, David: Is Your Strategic Alliance Really a Sale?, *Harvard Business Review*, 1995, January-February, Vol. 73, No. 1, pp. 97-105
- Bleeke, Joel; Ernst, David: The Way to Win in Cross-Border Alliances, *Harvard Business Review*, 1991, November-December, Vol. 69, No. 6, pp. 127-135
- Bonn, Mark A.; Furr, H. Leslie; Susskind, Alex M.: Predicting a Behavioral Profile for Pleasure Travelers on the Basis of Internet Use Segmentation, *Journal of Travel Research*, 1999, May, Vol. 37, pp. 333-340
- Borenstein, Severin: Hubs and High Fares: Dominance and Market Power in the U.S. Airline Industry, *Rand Journal of Economics*, 1989, Vol. 20, No. 3, pp. 344-365
- Borenstein, Severin: The Evolution of U.S. Airline Competition, *Journal of Economic Perspective*, 1992, Spring, Vol. 6, No. 2, pp. 45-72
- Botimer, Theodore C.: Airline Fare Product Design in the Context of Yield Management, *International Journal of Service Industry Management*, 2000, Vol. 1, No. 1, pp. 100-113
- Breuer, Jochen Peter: Das Synergoprogramm zeigt interkulturelle Kompetenz, *Marktforschung und Management*, 1994, 2. Quartal, Vol. 38, No. 2, pp. 61-65
- Bronder, Christoph: Was einer Kooperation den Erfolg sichert, *Harvard Business Manager*, 1993, Vol. 15, No. 1, pp. 20-36
- Bronder; Christoph; Pritzl, Rudolf: Leitfaden für strategische Allianzen, *Harvard Business Manager*, 1991, Vol. 13, No. 1, pp. 44-53
- Bucklin, Louis P.; Sengupta, Sanjit: Organizing Successful Co-Marketing Alliances, *Journal of Marketing*, 1993, April, Vol. 57, No. 2, pp. 32-46
- Buerkle, Tom; Smith, Rick: Who Lost Swissair?, *Institutional Investor*, 2002, February, Vol. 36, No. 2, pp. 42-49



- Button, Kenneth: Liberalising European Aviation: Is there an Empty Core Problem?, *Journal of Transport Economics and Policy*, 1996, September, Vol. 30, No. 3, pp. 275-291
- Buyck, Cathy: Blueprint for Europe's ATC?, *Air Transport World*, 2000, February, Vol. 37, No. 2, pp. 53-55
- Buyck, Cathy: The Big Move, *Air Transport World*, 2000, June, Vol. 37, No. 6, pp. 51-53
- Buyck, Cathy: The Reluctant Dutchess, *Air Transport World*, 2001, February, Vol. 38, No. 2, pp. 13-15
- Cameron, Doug: People Movers, *Airline Business*, 1997, March, Vol. 13, No. 3, pp. 50-52
- Chetty, Sylvie: The Case Study Method for Research in Small- and Medium-sized Firms, *International small Business Journal*, 1996, Vol. 15, No. 1, pp. 73-85
- Clarke, Christopher J.; Brennan, Kieron: Building Synergy in the Diversified Business, *Long Range Planning*, 1990, Vol. 23, No. 2, pp. 9-16
- Clougherty, Joseph A.: U.S. Domestic Airline Alliances: Does the National Welfare Impact Turn on Strategic International Gains?, *Contemporary Economic Policy*, 2000, July, Vol. 18, No. 3, pp. 304-314
- Crans, Berend J. H.: Liberalization of Airports, *Air and Space Law*, 1996, Vol. 21, No. 1, pp. 11-16
- Cullen, John B.; Johnson, Jean L.; Sakano, Tomoaki: Success through Commitment and Trust: the Soft Side of Strategic Alliances, *Management Journal of World Business*, 2000, Fall, Vol. 35, No. 3, pp. 223-240
- Czaplewski, Andrew J.; Ferguson, Jeffrey M.; Milliman, John F.: Southwest Airlines: How Internal Marketing Pilots Success, *Marketing Management*, 2001, September/October, Vol. 10, No. 3, pp. 14-17
- Dacin, M. Tina; Hitt, Michael A.: Selecting Partners for Successful International Alliances: Examination of U.S. and Korean Firms, *Journal of World Business*, 1997, Spring, Vol. 32, No. 1, pp. 3-16
- Day, George S.: Advantageous Alliances, *Journal of the Academy of Marketing Science*, 1995, Fall, Vol. 23, No. 4, pp. 297-300
- Dev, Chekitan S.; Klein, Saul; Fisher, Reed A.: A Market-Based Approach for Partner Selection in Marketing Alliances, *Journal of Travel Research*, 1996, Summer, Vol. 35, No. 1, pp. 11-17

- Devlin, Godfrey; Bleackley, Mark: Strategic Alliances - Guidelines for Success, Long Range Planning, 1988, Vol. 21, No. 5, pp. 18-23
- Dollinger, Marc J.; Golden, Peggy A.; Saxton, Todd: The Effect of Reputation on the Decision to Joint Ventures, Strategic Management Journal, 1997, Vol. 18, No. 2, pp. 127-140
- Dowling, Grahame R.; Uncles, Mark: Do Customer Loyalty Programs really Work?, Sloan Management Review, 1997, Summer, Vol. 38, No. 4, pp. 71-82
- Doz, Yves L.: The Evolution of Cooperation in Strategic Alliances: Initial Conditions or Learning Processes, Strategic Management Journal, 1996, Vol. 17, Special Issue, pp. 55-83
- Dresner, Martin E.; Windle, Robert J.: Alliances and Code-Sharing in the International Airline Industry, Built Environment, 1996, Vol. 22, No. 3, pp. 201-211
- Dresner, Martin; Lin, Jiun-Sheng Chris; Windle, Robert J.: The Impact of Low-Cost Carriers on Airport and Route Competition, Journal of Transport Economics and Policy, 1996, September, Vol. 30, No. 3, pp. 309-328
- Dyer, Gibb W.; Wilkins, Alan L.: Better Stories, not Better Constructs, to Generate Better Theory: a Rejoinder to Eisenhardt, Academy of Management Review, 1991, Vol. 16, No. 3, pp. 613-619
- Dyer, Jeffrey H.: Effective Interfirm Collaboration: How Firms Minimize Transaction Costs and Maximize Transaction Value, Strategic Management Journal, 1997, Vol. 18, No. 7, pp. 535-556
- Dyer, Jeffrey H.; Kale, Prashant; Singh, Harbir: How to Make Strategic Alliances Work, MIT Sloan Management Review, 2001, Summer, Vol. 42, No. 4, pp. 37-43
- Dyer, Jeffrey H.; Singh, Harbir: The Relational View: Cooperative Strategy and Sources of Interorganizational Competitive Advantage, Academy of Management Journal, 1998, Vol. 23, No. 4, pp. 660-679
- Ebers, Mark; Jarillo, Carlos J.: The Construction, Forms and Consequences of Industry Networks, International Studies of Management and Organization, 1997/98, Winter, Vol. 27, No. 4, pp. 3-21
- Eisenhardt, Kathleen M.: Building Theories from Case Study Research, Academy of Management Review, 1989, Vol. 14, No. 4, pp. 532-550

- Eisenhardt, Kathleen M.; Galunic, Charles D.: Coevolving at Last, a Way to Make Synergies Work, *Harvard Business Review*, 2000, January-February, Vol. 78, No. 1, pp. 91-101
- Ensign, Prescott C.: Interrelationships and Horizontal Strategy to Achieve Synergy and Competitive Advantage in the Diversified Firm, *Management Decision*, 1998, Vol. 36, No. 10, pp. 657-668
- Ernst, David; Halevy, Tammy: When to Think Alliance, *The McKinsey Quarterly*, 2000, No. 4, pp. 47-55
- Farkas, András; Martin, Alberto; Pompeo, Lucio; Rivera, Luis: Europe's best Airline Network Managers May Have Won an Unassailable Lead, *The McKinsey Quarterly*, 1997, No. 3, pp. 180-186
- Feldman, David; Zea, Michael; Schneiderbauer, Dieter: Value Judgements, *Airline Business*, 2000, June, Vol. 16, No. 6, pp. 69-73
- Feldman, Joan M.: Alliance Costs Start Building, *Air Transport World*, 2000, June, Vol. 37, No. 6, pp. 41-48
- Feldman, Joan M.: Calling the Slots, *Air Transport World*, 1998, July, Vol. 34, No. 7, pp. 154-156
- Feldman, Joan M.: Code-sharing Promiscuity Pays, *Air Transport World*, 1997, February, Vol. 34, No. 2, pp. 37-40
- Feldman, Joan M.: Making Alliances Work, *Air Transport World*, 1998, June, Vol. 34, No. 6, pp. 27-35
- Feldman, Joan M.: Naughty or Nice?, *Air Transport World*, 1994, June, Vol. 31, No. 6, pp. 173-175
- Feldman, Joan M.: Visualize Profits, *Airline E-Commerce (Supplement to Air Transport World)*, 2001, Spring, pp. 17-20
- Fitzsimons, Bernard: Will You Walk into My Website?, *Airline E-Commerce (Supplement to Air Transport World)*, 2001, Spring, pp. 14-16
- Flint, Perry: Cyber Hope or Cyber Hype?, *Air Transport World*, 1996, October, Vol. 33, No. 10, pp. 25-27
- Flint, Perry: Deregulation: 1978-1998, *Air Transport World*, 1998, May, Vol. 34, No. 5, p. 5
- Flint, Perry: E-United, *Air Transport World*, 2000, June, Vol. 37, No. 6, p. 74



- Flint, Perry: Is Bigger Better?, *Air Transport World*, 1998, March, Vol. 34, No. 3, pp. 31-33
- Flint, Perry: SIA's Global Tilt, *Air Transport World*, 2000, May, Vol. 37, No. 5, pp. 50-55
- Flint, Perry: Value beyond Miles, *Air Transport World*, 2000, March, Vol. 37, No. 3, pp. 29-33
- Flint, Perry; Donoghue, J. A.: Toward 2000: Crafting Tomorrow's Leaders, *Air Transport World*, 1997, October, Vol. 33, No. 10, pp. 27-49
- Flores Jr., Renato G.: Competition and Trade in Services: The Airline's Global Alliances, *World Economy*, 1998, November, Vol. 21, No. 8, pp. 1095-1118
- Gahl, Andreas: Die Konzeption der strategischen Allianzen im Spannungsfeld zwischen Flexibilität und Funktionalität, *Zeitung für betriebswirtschaftliche Forschung*, 1990, Sonderheft 27/90, pp. 35-48
- Gallacher, Jackie: New Challenge to Charter, *Airline Business*, 1999, October, Vol. 15, No. 10, pp. 68-70
- Gallacher, Jackie: Partners for Now, *Airline Business*, 1997, June, Vol. 13, No. 6, pp. 26-67
- Gallacher, Jackie: Power to the Plans, *Airline Business*, 1997, August, Vol. 13, No. 8, p. 34
- Giemulla, Elmar: Kopplung von Slot-Vergabe und Luftfahrzeuggröße aufgrund lokaler Sonderregelungen, *Zeitschrift für Luft- und Weltraumrecht*, 1996, März, Vol. 45, No. 3, pp. 245-259
- Gilbert, D. C.: Relationship Marketing and Airline Loyalty Schemes, *Tourism Management*, 1996, Vol. 17, No. 8, pp. 575-582
- Gill, Tom: Changing Channels, *Airline Business*, 2000, April, Vol. 16, No. 4, pp. 66-68
- Gill, Tom: Mobile Movers, *Airline Business*, 2000, May, Vol. 16, No. 5, pp. 85-86
- Gill, Tom: Ramp up, *Airline Business*, 2000, January, Vol. 16, No. 1, pp. 46-48
- Gill, Tom; Baker, Colin: Soft Landing, *Airline Business*, 2000, April, Vol. 16, No. 4, pp. 58-60
- Gleimer, Eileen M.: Slot Regulation at High Density Airports: How Did We Get here and where Are We Going?, *Journal of Air Law and Commerce*, 1996, Vol. 61, No. 4, pp. 877-931

- Glisson, Milton L.; Cunningham, William A.; Harris, James R.; Di Lorenzo-Aiss, Janet:  
Airline Industry Strategic Alliances: Marketing and Policy Implications, *International Journal of Physical Distribution & Logistics*, 1996, Vol. 26, No. 3, pp. 26-34
- Gomes-Casseres, Benjamin: Do You Really Have an Alliance Strategy?, *Strategy & Leadership*, 1998, September/October, Vol. 26, No. 4, pp. 6-11
- Gomes-Casseres, Benjamin: Group versus Group: How Alliance Networks Compete, *Harvard Business Review*, 1994, July-August, Vol. 72, No. 4, pp. 62-74
- Goold, Michael; Campbell, Andrew: Desperately Seeking Synergy, *Harvard Business Review*, 1998, September-October, Vol. 76, No. 5, pp. 131-143
- Goold, Michael; Campbell, Andrew: Taking Stock of Synergy, *Long Range Planning*, 2000, February, Vol. 33, No. 1, pp. 72-96
- Grobbs, Jos; Buyck, Cathy: Making Haste Slowly, *Airline E-Commerce (Supplement to Air Transport World)*, 2001, Spring, pp. 7-9
- Grönroos, Christian: Relationship Marketing: The Strategy Continuum, *Journal of the Academy of Marketing Science*, 1995, Fall, Vol. 23, No. 4, pp. 252-254
- Gulati, Ranjay: Alliances and Networks, *Strategic Management Journal*, 1998, Vol. 19, No. 4, pp. 293-317
- Gulati, Ranjay; Khanna, Tarun; Nohria, Nitin: Unilateral Commitments and the Importance of Process in Alliances, *Sloan Management Review*, 1994, Spring, Vol. 35, No. 3, pp. 61-69
- Gulati, Ranjay; Singh, Habir: The Architecture of Cooperation: Managing Coordination Costs and Appropriation Concerns in Strategic Alliances, *Administrative Science Quarterly*, 1998, December, Vol. 43, No. 4, pp. 781-814
- Hamel, Gary: Competition for Competence and Inter-partner Learning within International Strategic Alliances, *Strategic Management Journal*, 1991, Summer Special Issue, Vol. 12, pp. 83-103
- Hamel, Gary; Doz, Yves L.; Prahalad, Coimbatore K.: Collaborate with Your Competitors - and Win, *Harvard Business Review*, 1989, January-February, Vol. 67, No. 1, pp. 133-139
- Harris, Frederick H. de; Peacock, Peter: Hold My Place, Please, *Marketing Management*, 1995, Fall, Vol. 4, No. 2, pp. 34-46

- Harrison, Jeffrey S.; Hitt, Michael A.; Hoskisson, Robert E.; Ireland, Duane R.: Resource Complimentarity in Business Combinations: Extending the Logic to Organisational Alliances, *Journal of Management*, 2001, September, Vol. 27, No. 6, pp. 679-690
- Hemphill, Thomas A.: Airline Marketing Alliances and U.S. Competition Policy: Does the Consumer Benefit?, *Business Horizons*, 2000, March-April, Vol. 43, No. 2, pp. 17-24
- Henson, Robin K.: Understanding Internal Consistency Reliability Estimates: a Conceptual Primer on Coefficient Alpha, *Measurement and Evaluation in Counselling and Development*, 2001, October, Vol. 34, No. 3, pp. 177-189
- Hill, Leonard: Global Challenger, *Air Transport World*, 1999, December, Vol. 36, No. 12, pp. 52-54
- Hitt, Michael A.; Dacin, M. Tina; Levitas, Edward; Arregle, Jean-Luc; Borza, Anca: Partner Selection in Emerging and Developed Market Contexts: Resource-based and Organisational Learning Perspectives, *Academy of Management Journal*, 2000, June, Vol. 43, No. 3, pp. 449-464
- Horn, Michelle; Barkin, Tom: The Labour Lever, *Airline Business*, 1998, January, Vol. 14, No. 1, pp. 46-49
- Hoskisson, Robert E.; Hitt, Michael A.; Wan, William P.; Yiu, Daphne: Theory and Research in Strategic Management: Swings of a Pendulum, *Journal of Management*, 1999, May-June, Vol. 25, No. 3, pp. 417-456
- Hosmer, Larue Tone: Trust: The Connecting Link between Organisational Theory and Philosophical Ethics, *Academy of Management Review*, 1995, April, Vol. 20, No. 2, pp. 379-403
- Inkpen, Andrew C.: Learning and Knowledge Acquisition through International Strategic Alliances, *Academy of Management Executive*, 1998, Vol. 12, No. 4, pp. 69-80
- Jarillo, Carlos J.: On Strategic Networks, *Strategic Management Journal*, 1988, Vol. 9, No. 1, pp. 31-41
- Jegminat, Georg: Allianzen fürchten Brüsseler Regulierungswut, *FVW*, 1997, No. 27, pp. 62-63
- Karapetrovic, Stanislav; Willborn, Walter: Audit Systems: Concepts and Practices, *Total Quality Management*, 2001, Vol. 12, No. 1, pp. 13-28



- Kaynak, Erdener; Kucukemiroglu, Orsay; Kara, Ali: Consumer's Perception of Airlines: a Correspondence Analysis Approach in a Global Airline Industry, *Management International Review*, 1994, Vol. 34, No. 3, pp. 235-254
- Khanna, Tarun: The Scope of Alliances, *Organization Science*, 1998, May-June, Vol. 9, No. 3, pp. 340-355
- Khanna, Tarun; Gulati, Ranjay; Nohria, Nitin: The Dynamics of Learning Alliances: Competition, Cooperation, and Relative Scope, *Strategic Management Journal*, 1998, Vol. 19, No. 3, pp. 193-210
- Klein, Hemjö: Allianzen - Herausforderungen und Strategien aus Sicht der Deutschen Lufthansa AG, *Internationales Verkehrswesen*, 1996, Vol. 48, No. 12, pp. 12-16
- Knibb, David: Play by the Rules, *Airline Business*, 2000, April, Vol. 16, No. 4, pp. 72-74
- Kogut, Bruce: The Stability of Joint Ventures: Reciprocity and Competitive Rivalry, *Journal of Industrial Economics*, 1989, December, Vol. 38, No. 2, pp. 183-198
- Koza, Mitchell P.; Lewin, Arie Y.: The Co-evolution of Strategic Alliances, *Organization Science*, 1998, May-June, Vol. 9, No. 3, pp. 255-264
- Law, Robert; Leung, Rita: A Study of Airline's Online Reservation Services on the Internet, *Journal of Travel Research*, 2000, November, Vol. 39, pp. 202-211
- Lei, David; Slocum, John W. jr.: Global Strategy, Competence-Building and Strategic Alliances, *California Management Review*, 1992, Vol. 31, No. 1, pp. 81-97
- Lindquist, John: Alliances: Marriages Made in Heaven, *The Avmark Aviation Economist*, 1996, January/February, pp. 12-13
- Lorange, Peter; Roos, Johan: Analytical Steps in the Formation of Strategic Alliances, *Journal of Organizational Change Management*, 1991, Vol. 4, No. 1, pp. 60-72
- Lorenzoni, Gianni; Baden-Fuller, Charles: Creating a Strategic Centre to Manage a Web of Partners, *California Management Review*, 1995, Vol. 37, No. 3, pp. 146-163
- Low, Brian K. H.: Managing Business Relationships and Positions in Industrial Networks, *Industrial Marketing Management*, 1997, Vol. 26, No. 1, pp. 189-202
- MacAvoy, Thomas C.: Choosing an Alliance Manager, *Research-Technology Management*, 1997, September/October, Vol. 40, No. 5, pp. 12-14

- Machatschke, Michael: Im Blindflug, *Manager Magazin*, 2000, March, Vol. 30, No. 3, pp. 120-128
- Madhok, Anoop; Tallman, Stephen B.: Resources, Transactions and Rents: Managing Value through Interfirm Collaborative Relationships, *Organization Science*, 1998, May-June, Vol. 9, No. 3, pp. 326-339
- Mahajan, Vijay; Wind, Yoram: Business Synergy Does not always Pay off, *Long Range Planning*, 1988, Vol. 21, No. 1, pp. 59-65
- Mak, Barry; Go, Frank: Matching Global Competition: Cooperation among Asian Airlines, *Tourism Management*, 1995, Vol. 16, No.1, pp. 61-65
- Martin, Alberto; Pompeo, Lucio; Rivera, Luis: Network Agility, *Airline Business*, 1997, July, Vol. 13, No. 7, pp. 56-61
- Martinsuo, Miia: Balancing Large Scope and Project Manageability in a Qualitative Research Design, *Management Decision*, 2001, Vol. 39, No. 7, pp. 539-550
- McCubbrey, Donald J.: Disintegration and Reintermediation in the U.S. Air Travel Distribution Industry, *Communications of the Association for Information Systems*, 1999, Vol. 1, Article 18, pp. 1-39
- McDonald, Michele: Big Brother Loves You, *Airline E-Commerce (Supplement to Air Transport World)*, 2001, Spring, pp. 11-12
- Meining, Wolfgang; Rennert, Christian: Synergieeffekte bei Dienstleistungen, *Marktforschung und Management*, 1990, 2. Quartal, Vol. 34, No. 2, pp. 72-77
- Miller, William H.: Growing Globally at last, *Industryweek*, 1997, March 3, Vol. 246, No. 5, pp. 64-71
- Mintzberg, Henry: An emerging Strategy of "Direct" Research, *Administrative Science Quarterly*, 1979, December, Vol. 24, No. 4, pp. 582-589
- Moorman, Robert W.: A Helping Hand, *Air Transport World*, 1999, December, Vol. 36, No. 12, pp. 66-68
- Moorman, Robert W.: First at the Gold Rush, *Air Transport World*, 1997, November, Vol. 35, No. 11, pp. 121-125
- Morrell, Peter; Lu H-Y, Cherie: Ahead of the Game, *Airline Business*, 2000, February, Vol. 16, No. 2, pp. 80-83

- Moss Kanter, Rosabeth: Collaborative Advantage: The Art of Alliance, Harvard Business Review, 1994, July-August, Vol. 72, No. 4, pp. 99-101
- Mowery, David C.; Oxley, Joanne E.; Silverman, Brian S.: Strategic Alliances and Interfirm Knowledge Transfer, Strategic Management Journal, 1996, Winter Special Issue, Vol. 17, pp. 77-91
- N/A (no Author): A One Way Bet, Airline Business, 2000, March, Vol. 16, No. 3, p. 9
- N/A: Airline Technical Alliances - Evolutionary Trends, Aircraft Technology Engineering & Maintenance, 2001, August/September, No. 53, pp. 54-61
- N/A: Blue Skies, Another Good Year, Air Transport World, 2000, January, Vol. 37, No. 1, pp. 32-40
- N/A: Deutsch-amerikanische Abkommen im Luftverkehr, Verkehrsnachrichten, 1996, April, No. 4, pp. 6-7
- N/A: Let Fly, The Economist, 2001, March, 10, pp. 14-16
- N/A: Playing for Position, Airline Business, 2001, July, Vol. 17, No. 7, pp. 40-41
- N/A: Ranking of the World Lessors, Airline Business, 2000, February, Vol. 16, No. 2, pp. 65-73
- N/A: Snakes and Ladders, Airline Fleet & Asset Management, 2001, September/October, No. 15, pp. 16-22
- N/A: Standards for the Professional Practice of Internal Auditing, Internal Auditor, 2001, February, Vol. 58, No. 1, pp. 79-83
- N/A: The Airline Rankings - Financials, Airline Business, 2000, September, Vol. 16, No. 9, pp. 68-74
- N/A: Webbed Wings, The Economist, 2001, March, 10, pp. 20-21
- Nelms, Douglas W.: Getting Their Act Together, Air Transport World, 1999, April, Vol. 36, No. 4, pp. 27-30
- Nelms, Douglas W.: Imaging's New Demands, Air Transport World, 1996, April, Vol. 33, No. 4, pp. 34-38
- Newman, Victor; Chaharbaghi, Kazem: Strategic Alliances in Fast-moving Markets, Long Range Planning, 1996, Vol. 29, No. 6, pp. 850-856



- Nuutinen, Heini: Competition Hots up between Alliances, *The Avmark Aviation Economist*, 1997, August/September, pp. 4-9
- Ohmae, Kenichi: Strategic Alliances in the Borderless World, *Zeitung für betriebswirtschaftliche Forschung*, 1990, Sonderheft 27/90, pp. 11-20
- Ombelet, Henk: Airline Alliance Survey 2001, *Airline Business*, 2001, July, Vol. 17, No. 7, pp. 49-70
- Osegowitsch, Thomas: The Art and Science of Synergy: the Case of the Auto Industry, *Business Horizons*, 2001, March-April, Vol. 44, No. 2, pp. 17-24
- O'Toole, Kevin: IT Trends Survey 2001, *Airline Business*, 2001, August, Vol. 17, No. 8, pp. 46-55
- O'Toole, Kevin: Partners in IT, *Airline Business*, 2000, January, Vol. 16, No. 1, pp. 50-51
- O'Toole, Kevin: The Major Airline Alliance Groupings, *Airline Business*, 1999, July, Vol. 15, No. 7, pp. 36-37
- O'Toole, Kevin; Ombelet, Henk; Rothman, Sean: Profits Slide again, *Airline Business*, 2000, September, Vol. 16, No. 9, pp. 62-63
- O'Toole, Kevin; Walker, Karen: Motivated Mergers, *Airline Business*, 2000, July, Vol. 16, No. 7, pp. 46-48
- Oum, Tae Hoon; Park Jong-Hun; Zhang, Anming: The Effects of Airline Codesharing Agreements on Firm Conduct and International Air Fares, *Journal of Transport Economics and Policy*, 1996, May, Vol. 30, No. 2, pp. 187-202
- Oum, Tae Hoon; Taylor, Allison J.: Emerging Patterns in Intercontinental Air Linkages and Implications for International Route Allocation Policy, *Transportation Journal*, 1995, Summer, Vol. 34, No. 4, pp. 5-27
- Oum, Tae Hoon; Taylor, Allison J.; Zhang, Anming: Strategic Airline Policy in the Globalizing Airline Networks, *Transportation Journal*, 1993, Spring, Vol. 32, No. 2, pp. 14-30
- Park, Jong-Hun; Zhang, Anming: Airline Alliances and Partner Firm's Output, *Transportation Research: Part E: Logistics and Transportation Review*, 1998, December, Vol. 34, No. 4, pp. 245-255

- Park, Jong-Hun; Zhang, Anming: An Empirical Analysis of Global Airline Alliances: Cases in the North Atlantic Markets, *Review of Industrial Organization*, 2000, June, Vol. 16, No. 4, pp. 367-384
- Park, Seung Ho; Ungson, Gerardo R.: Interfirm Rivalry and Managerial Complexity: a Conceptual Framework of Alliance Failure, *Organization Science*, 2001, January-February, Vol. 12, No. 1, pp. 37-53
- Park, Seung Ho; Ungson, Gerardo R.: The Effect of National Culture, Organisational Complementarity, and Economic Motivation on Joint Venture Dissolution, *Academy of Management Journal*, 1997, April, Vol. 40, No. 2, pp. 279-307
- Parkhe, Arvind: "Messy" Research, Methodological Predispositions, and Theory Development in International Joint Ventures, *Academy of Management Review*, 1993, Vol. 18, No. 2, pp. 227-268
- Parkhe, Arvind: Building Trust in International Alliances, *Journal of World Business*, 1998, Winter, Vol. 33, No. 4, pp. 417-437
- Parkhe, Arvind: Global Business Alliances, *Business Horizons*, 2000, September/October, Vol. 43, No. 5, pp. 2-3
- Parkhe, Arvind: Strategic Alliance Structuring: a Game Theoretic and Transaction Cost Examination of Interfirm Cooperation, *Academy of Management Journal*, 1993, August, Vol. 36, No. 4, pp. 794-829
- Parkhe, Arvind: Understanding Trust in International Alliances, *Journal of World Business*, 1998, Fall, Vol. 33, No. 3, pp. 219-240
- Perlmutter, Howard V.; Heenan, David A.: Cooperate to Compete Globally, *Harvard Business Review*, 1986, March/April, Vol. 64, No. 2, pp. 136-153
- Perry, Chad: Case Research in Marketing, *The Marketing Review*, 2001, Vol. 1, No. 3, pp. 303-323
- Perry, Chad: Processes of a Case Study Methodology for Postgraduate Research in Marketing, *European Journal of Marketing*, 1998, Vol. 32, No. 9/10, pp. 785-802
- Petersen, Randy: The Price of Loyalty, *Airline Business*, 1997, August, Vol. 13, No. 8, pp. 38-40
- Phillips, Edward H.: Airline Outlook, *Aviation Week and Space Technology*, 2002, January 1, Vol. 156, No. 1, pp. 15

- Pilling, Mark: Drive to Outsource, *Airline Business*, 2002, January, Vol. 18, No. 1, pp. 38-42
- Pilling, Mark: Empire Building, *Airline Business*, 2001, January, Vol. 17, No. 1, pp. 52-54
- Pilling, Mark: Flights of Fancy, *Airline Business*, 2001, January, Vol. 17, No. 1, pp. 44-47
- Pilling, Mark: Food for Thought, *Airline Business*, 2001, January, Vol. 17, No. 1, pp. 48-50
- Pilling, Mark: Getting a Grip, *Airline Business*, 2001, June, Vol. 17, No. 6, pp. 57-59
- Pinar, Erkan: The Star Hub, *Airline Business*, 2000, December, Vol. 16, No. 12, pp. 70-71
- Pommes de, Carlos: Are you IT-compatible?, *Airline Business*, 1998, July, Vol. 14, No. 7, pp. 26-29
- Prahalad, Coimbatore K.; Ramaswamy, Venkatram: Co-opting Customer Competence, *Harvard Business Review*, 2000, January/February, Vol. 78, No. 1, pp. 78-87
- Prousaloglou, Kimon; Koppelman, Frank S.: The Choice of Air Carrier, Flight and Fare Class, *Journal of Air Transport Management*, 1999, Vol. 5, No. 4, pp. 193-201
- Raffée, Hans; Eisele, Jürgen: Joint Ventures - Nur die Hälfte floriert, *Harvard Business Manager*, 1994, 3. Quartal, Vol. 15, No. 3, pp. 16-22
- Rao, Akshay R.; Qu, Lu; Ruekert, Robert W.: Signaling Unobservable Product Quality through a Brand Ally, *Journal of Marketing Research*, 1999, May, Vol. 36, No. 2, pp. 258-268
- Rao, Akshay R.; Ruekert, Robert W.: Brand Alliance as Signals of Product Quality, *Sloan Management Review*, 1994, Fall, Vol. 36, No. 1, pp. 87-97
- Reece, William S.; Sobel, Russell S.: Diagrammatic Approach to Capacity-Constrained Price Discrimination, *Southern Economic Journal*, 2000, April, Vol. 66, No. 4, pp. 1001-1008
- Rondinelli, Dennis; Berry, Michael: Multimodal Transportation, Logistics, and the Environment: Managing Interactions in a Global Economy, *European Management Journal*, 2000, August, Vol. 18, No. 4, pp. 398-409
- Rose, Sarah: Cloudy Skies, Money, 1998, October, Vol. 27, No. 10, pp. 210-204
- Rutner, Stephen M.; Brown, John H.: Outsourcing as an Airline Strategy, *Journal of Air Transportation World Wide*, 1999, Vol. 4, No. 2, pp. 22-31
- Sacher, Wolfgang: Antitrust Immunity für die Lufthansa - United Allianz, *Zeitschrift für Luft- und Weltraumrecht*, 1996, April, Vol. 45, No. 4, pp. 367-379



- Scandura, Terri A.; Williams, Ethlyn A.: Research Methodology in Management: Current Practices, Trends, and Implications for Future Research, *Academy of Management Journal*, 2000, Vol. 43, No. 6, pp. 1248-1264
- Schmengler, Hans Joachim; Thieme, Matthias: Die Bedeutung eines Bonusprogrammes im Marketing einer Luftverkehrsgesellschaft, *Marketing Zeitung für Forschung und Praxis*, 1995, 2. Quartal, Heft 2, pp. 130-135
- Scott, Earl: Freer Skies?, *Airline Business*, 2000, April, Vol. 16, No. 4, pp. 94-96
- Shifrin, Carole A.: Atlantic Luxury, *Airline Business*, 2001, June, Vol. 17, No. 6, pp. 50-53
- Sireci, Stephen G.: Gathering and Analyzing Content Validity Data, *Educational Assessment*, 1998, Vol. 5, No. 4, pp. 299-321
- Smith, Ken G.; Young, Greg; Becerra, Manuel; Grimm, Curtis M.: An Assessment of the Validity of Competitive Dynamic Research, *Academy of Management Proceedings*, 1996, pp. 61-65
- Spekman, Robert E.; Forbes, III, Theodore M.; Isabella, Lynn A.; MacAvoy, Thomas C.: Alliance Management: A View from the Past and a Look to the Future, *Journal of Management Studies*, 1998, November, Vol. 35, No. 6, pp. 747-772
- Spencer Stuart: The Global Challenge, *Airline Business*, 2001, August, Vol. 17, No. 8, pp. 80-84
- Spickers, Jürgen: Management von Synergiepotentialen, *Marktforschung und Management*, 1994, 2. Quartal, Vol. 38, No. 2, pp. 43-47
- Strickland, James D.: Auditing Joint Ventures and Strategic Alliances, *Bank Accounting & Finance*, 1999, Spring, Vol. 12, No. 3, pp. 20-25
- Subramanian, Janakiram; Stidham Jr., Shaler; Lautenbacher, Conrad J.: Airline Yield Management with Overbooking, Cancellations, and No-Shows, *Transportation Science*, 1999, May, Vol. 33, No. 2, pp. 147-167
- Tarry, Chris: Alliances Wait for the Music to Stop, *Airline Business*, 2001, March, Vol. 17, No. 3, pp. 86-87
- Tarry, Chris: Playing for Profit, *Airline Business*, 1999, June, Vol. 15, No. 6, pp. 90-92
- ter Kuile, Alexander: Hub Fever, *Airline Business*, 1997, December, Vol. 13, No. 12, pp. 66-

- Thierer, Adam D.: 20th Anniversary of Airline Deregulation: Cause for Celebration, not Re-Regulation, *The Heritage Foundation Backgrounder*, 1998, Apr 22, No. 1173, pp. 1-17
- Triller, Ursula: Bund fürs Fliegen, *Wirtschaftswoche*, 1995, 13.7., Vol. 49, Nr. 29, pp. 66-68
- Vander Kraats, Stephan A.: Gaining Competitive Edge through Airline Alliances, *Competitiveness Review*, 2000, Vol. 10, No. 2, pp. 56-64
- Varadarajan, Rajan, P.; Cunningham, Margaret H.: Strategic Alliances: a Synthesis of Conceptual Foundations, *Journal of the Academy of Marketing Science*, 1995, Fall, Vol. 23, No. 4, pp. 282-296
- Vizjak, Andrej: Exploiting your Synergy Potential: Promoting Collaboration between Business Units, *Long Range Planning*, 1994, Vol. 27, No. 1, pp. 25-35
- Walker, Karen: Maintaining an Edge, *Airline Business*, 2000, October, Vol. 16, No. 10, pp. 57-61
- Walker, Karen: Plane Dotty, *Airline Business*, 2000, August, Vol. 16, No. 8, pp. 66-68
- Walker, Karen: The King of Low-Cost, *Airline Business*, 1999, June, Vol. 15, No. 6, pp. 38-42
- Walker, Karen: Worlds Apart, *Airline Business*, 2000, July, Vol. 16, No. 7, pp. 28-29
- Wallace, Bob; Hulme, George V.: The Modern Call Centre, *Information Week*, 2001, 04.09.01, No. 832, pp. 38-45
- Walters, Bruce A.; Peters, Steve; Dess, Gregory G.: Strategic Alliances and Joint Ventures: Making them Work, *Business Horizons*, 1994, July-August, Vol. 37, No. 4, pp. 5-10
- Weatherford, Lawrence R.; Bodily, Samuel E.: A Taxonomy and Research Overview of Perishable-asset Revenue Management: Yield management, Overbooking, and Pricing, *Operations Research*, 1992, Vol. 40, No. 5, pp. 831-844
- Webb, John: Questionnaires and Their Design, *The Marketing Review*, 2000, Vol. 1, No. 3, pp. 197-218
- Wilson, Elizabeth; Vlosky, Richard P.: Partnering Relationship Activities: Building Theory from Case Study Research, *Journal of Business Research*, 1997, Vol. 39, No. 1, pp. 59-70
- Winch, Archibald: Alles Benchmark! Oder?, *Touristik Aktuell*, 1998, Nov 28, Vol. 10, No. 39, p. 20

- Wood, Sue; Gallacher, Jackie: Hold Your Horses, *Airline Business*, 1998, June, Vol. 14, No. 6, pp. 43-81
- Woodley, Quentin; Barkin, Tom; Morgan, Todd: How Does Your Airline Grow?, *Airline Business*, 1998, June, Vol. 14, No. 6, pp. 34-37
- Yin, Robert K.: The Case Study Crisis: some Answers, *Administrative Science Quarterly*, 1981, Vol. 26, No. 1, pp. 58-65
- Youssef, Waleed; Hansen, Mark: Consequences of Strategic Alliances between International Airlines: The Case of Swissair and SAS, *Transportation Research*, 1994, Vol. 28A, No. 5, pp. 415-431
- Zaheer, Akbar; McEvily, Bill; Perrone, Vincenzo: Does Trust Matter? Exploring the Effects of Interorganizational and Interpersonal Trust on Performance, *Organizational Science*, 1997, March/April, Vol. 9, No. 2, pp. 123-141
- Zhang, Anming: An Analysis of Fortress Hubs in Airline Networks, *Journal of Transport Economics and Policy*, 1996, September, Vol. 30, No. 3, pp. 293-307
- Zhang, Charles: The Art of Coordination, *Internal Auditor*, 1998, April, Vol. 55, No. 2, pp. 55-58
- Zinn, Walter; Parasuraman, A.: Scope and Intensity of Logistics-based Strategic Alliances, *Industrial Marketing Management*, 1997, Vol. 26, No. 1, pp. 137-147



## Books

- Andrey, Alain: Das Partnerprofil als Bestandteil der Kooperationsstrategie: Strategische Allianzen bei der Swissair, in: Bronder, Christoph; Pritzl, Rudolf (Hrsg.): Wegweiser für strategische Allianzen: Meilen- und Stolpersteine bei Kooperationen, Frankfurt am Main, Frankfurter Allgemeine Zeitung, Zeitung für Deutschland; Wiesbaden, Gabler, 1992, pp. 323-340
- Ansoff, H. Igor: Corporate Strategy: an Analytical Approach to Business Policy for Growth and Expansion, New York, McGraw Hill, 1965
- Aulak, Preet S.; Kotabe Masaaki; Sahay, Arvind: Trust and Performance on Cross-border Marketing Partnerships, in: Beamish, Paul W.; Killing, Peter J.: Cooperative Strategies, San Francisco, The New Lexington Press, 1997, pp. 164-196
- Babbie, Earl: The Practice of Social Research, 3rd edition Belmont, Wadsworth Publishing Company, 1983
- Banfe, Charles. F.: Airline Management, Englewood Cliffs, New Jersey, Prentice Hall, 1992
- Baumol, W. J.; Panzar, J. C.; Willig, R. D.: Contestable Markets and the Theory of Industry Structure, New York, Harcourt Brace Jovanovich, 1982
- Bleeke, Joel; Bull-Larsen, Thomas; Ernst, David: Wertsteigerung durch Allianzen, in: Bronder, Christoph; Pritzl, Rudolf (Hrsg.): Wegweiser für strategische Allianzen: Meilen- und Stolpersteine bei Kooperationen, Frankfurt am Main, Frankfurter Allgemeine Zeitung, Zeitung für Deutschland; Wiesbaden, Gabler, 1992, pp. 103-125
- Bleicher, Knut: Der Strategie, Struktur- und Kulturfit Strategischer Allianzen als Erfolgsfaktor, in: Bronder, Christoph; Pritzl, Rudolf (Hrsg.): Wegweiser für strategische Allianzen: Meilen- und Stolpersteine bei Kooperationen, Frankfurt am Main, Frankfurter Allgemeine Zeitung, Zeitung für Deutschland; Wiesbaden, Gabler, 1992, pp. 267-292
- Bronder, Christoph; Pritzl, Rudolf: Ein konzeptioneller Ansatz zur Gestaltung und Entwicklung Strategischer Allianzen, in: Bronder, Christoph; Pritzl, Rudolf (Hrsg.): Wegweiser für strategische Allianzen: Meilen- und Stolpersteine bei Kooperationen, Frankfurt am Main, Frankfurter Allgemeine Zeitung, Zeitung für Deutschland; Wiesbaden, Gabler, 1992, pp. 17-44
- Buckminster Fuller, Richard: Synergetics, Explorations in the Geometry of Thinking, New York, Macmillan Publishing, 1975

- Burrell, Gibson; Morgan, Gareth: *Sociological Paradigms and Organisational Analysis*, London, Heinemann Educational Books, 1979
- Campbell, Andrew; Luchs, Kathleen S.: *Strategic Synergy*, Butterworth-Heineman, Oxford, 1992
- Capineri, Cristina; Kamann, Dirk-Jan: *Synergy in Networks: Concepts*, in: Button, Kenneth J.; Nijkamp, Peter; Priemus, Hugo: *Transport Networks in Europe: Concepts, Analysis and Policies*, Cheltenham, Northampton/Massachusetts, Edward Elgar Publishing, 1998, pp. 35-56
- Carson, David; Gilmore, Audrey; Perry, Chad; Gronhaug, Kjell: *Qualitative Marketing Research*, London, Sage, 2001
- Caves, Robert E.; Geoffrey, Gosling D.: *Strategic Airport Planning*, Amsterdam, Lausanne, New York, Oxford, Shannon, Singapore, Tokyo, Pergamon, 1999
- Contractor, Farok J; Lorange, Peter: *Why Should Firms Cooperate? The Strategy and Economics Basis for Cooperative Ventures*, in: Contractor, Farok J; Lorange, Peter: *Cooperative Strategies in International Business*, Lexington/Massachusetts, Lexington Books, 1988, pp. 3-30
- Doganis, Rigas: *Flying off Course: the Economics of International Airlines*, London, George Allen & Unwin, 1986
- Doganis, Rigas: *The Airline Business in the 21st Century*, London, New York, Routledge, 2001
- Faulks, Rex W.: *International Transport, an Introduction to Current Practices and Future Trends*, London, Kogan Page, 1999
- Fontanari, Martin L.: *Voraussetzungen für den Kooperationserfolg*, in: Schertler, Walter (Hrsg.): *Management von Unternehmenskooperationen*, Wien, Ueberreuther, 1995, pp. 115-187
- Freiberg, Kevin; Freiberg, Jackie: *Nuts!: Southwest Airline's Crazy Recipe for Business and Personal Success*, Austin/Texas, Bard Books, 1996
- Gomes-Casseres, Benjamin: *The Alliance Revolution - The New Shape of Business Rivalry*, Cambridge/Massachusetts; London, Harvard University Press, 1996
- Hanlon, Pat: *Global Airlines: Competition in a Transnational Industry*, Oxford, Butterworth-Heinemann, 1996

- Harrigan, Kathrin Rudie: Strategic Alliances and Partner Asymmetries, in: Contractor, Farok J; Lorange, Peter: Cooperative Strategies in International Business, Lexington/Massachusetts, Lexington Books, 1988, pp. 205-226
- Hirzel, Matthias: Erkannte Synergien verwirklichen, in: Hirzel, Leder & Partner (Hrsg.): Synergiemanagement: Komplexität beherrschen, Wiesbaden, Gabler, 1993, pp. 31-42
- Hunziker, Hans-Jörg: Strategische Planung und Politik im Luftverkehr, Bern, Stuttgart, Paul Haupt, 1983
- Klein, Hemjö: Das Marketing der Lufthansa, in: Roth, Peter; Schrand, Axel: Tourismusmarketing: Das Marketing der Tourismusorganisationen, Verkehrsträger, Reiseveranstalter und Reisebüros, München, Vahlen, 1995, pp. 255-274
- Klobischke, Alf: Airlines: Daten, Fakten, Hintergründe - damit Sie wissen, mit wem Sie fliegen, Köln, vgs, 1997
- Koot, Willem T. M.: Underlying Dilemmas in the Management of International Joint Ventures, in: Contractor, Farok J; Lorange, Peter: Cooperative Strategies in International Business, Lexington/Massachusetts, Lexington Books, 1988, pp. 347-367
- Kotler, Philip; Bliemel, Friedhelm: Marketing-Management: Analyse, Planung, Umsetzung, Steuerung, Stuttgart, Schaefer-Poeschel, 1995
- Leder, Thomas: Synergie als Unternehmensveredlung, in: Hirzel, Leder & Partner (Hrsg.): Synergiemanagement: Komplexität beherrschen, Wiesbaden, Gabler, 1993, pp. 13-21
- Lewis, Jordan D.: Partnerships for Profit: Structuring and Managing Strategic Alliances, New York, The Free Press, 1990
- Lincoln, Yvonna S.; Guba, Egon G.: Naturalistic Inquiry, Beverly Hills, California, Sage, 1985
- Lorange, Peter; Roos, Johan: Stolpersteine beim Management Strategischer Allianzen, in: Bronder, Christoph; Pritzl, Rudolf (Hrsg.): Wegweiser für strategische Allianzen: Meilen- und Stolpersteine bei Kooperationen, Frankfurt am Main, Frankfurter Allgemeine Zeitung, Zeitung für Deutschland; Wiesbaden, Gabler, 1992, pp. 343-355
- Lutz, Violet: Horizontale Strategische Allianzen: Ansatzpunkte zu ihrer Institutionalisierung, Hamburg, S + W Steuer- und Wirtschaftsverlag, 1993



- Lyth, Peter: Experiencing Turbulence: Regulation and Deregulation in the International Air Transport Industry 1930-1990, in: McConville, James (edt.): Transportation Regulation Matters, London; Washington, Pinter, 1997, pp. 154-174
- Mohr, Niko; Rodermann, Marcus: Airlines - Eine industrieökonomische Betrachtung, Trier, Eigenverlag, 1995
- N/A: The American Heritage Dictionary of the English Language, Boston, Houghton Mifflin Company, 2000
- Oppenheim, Abraham Naftali: Questionnaire Design, Interviewing and Attitude Measurement, London, Printer, 1992
- Pfähler, Wilhelm; Lehmann-Grube, Ulrich: Synergien im Investitionsentscheidungsprozess, in: Hirzel, Leder & Partner (Hrsg.): Synergiemanagement: Komplexität beherrschen, Wiesbaden, Gabler, 1993, pp. 129-143
- Podsiadlowski, Astrid: Zusammenarbeit in interkulturellen Teams, in: Spieß, Erika (Hrsg.): Formen der Kooperation: Bedingungen und Perspektiven, Göttingen, Verlag für angewandte Psychologie, 1998, pp. 193-209
- Pompl, Wilhelm: Luftverkehr: eine ökonomische und politische Einführung; 3. völlig neubearb. und erw. Auflage, Berlin, Heidelberg, New York, Springer, 1998
- Porter, Michael E.: Competitive Advantage; Creating and Sustaining Superior Performance, New York, London, The Free Press, 1985
- Porter, Michael E.: Competitive Strategy; Techniques for Analysing Industries and Competitors, New York, The Free Press, 1980
- Reynolds-Feighan, Aisling J.; Berechman, Joseph: Network Impacts of Changes in the European Aviation Industry, in: Button, Kenneth J.; Nijkamp, Peter; Priemus, Hugo: Transport Networks in Europe: Concepts, Analysis and Policies, Cheltenham, Northampton/Massachusetts, Edward Elgar Publishing, 1995, pp. 265-290
- Rhumbler, Felix: Synergien begreifen und orten, in: Hirzel, Leder & Partner (Hrsg.): Synergiemanagement: Komplexität beherrschen, Wiesbaden, Gabler, 1993, pp. 23-30
- Rodermann, Marcus: Das Problem der Synergieplanung versus Synergierrealisierung und die Notwendigkeit zur konzeptionellen Klärung des Synergiebegriffs, in: Schertler, Walter (Hrsg.): Management von Unternehmenskooperationen, Wien, Ueberreuther, 1995, pp. 251-315

- Rößl, Dietmar: Gestaltung komplexer Austauschbeziehungen: Analyse zwischenbetrieblicher Kooperation, Wiesbaden, Gabler, 1994
- Schmidt, Stefan: Strategische Allianzen im Luftverkehr - Erfolgsorientiertes Management europäischer Flug-Carrier, Trier, Eigenverlag, 1993
- Shaw, Stephen: Airline Marketing and Management, 3rd edition, London, Pitman Publishing, 1990
- Shearman, Philip: Air Transport - Strategic Issues in Planning and Development, London, Pitman Publishing, 1992
- Sterzenbach, Rüdiger: Luftverkehr: betriebswirtschaftliches Lehr- und Handbuch, München, Wien, Oldenbourg, 1996
- Sulzmaier, Sonja: Consumer Oriented Business Design: the Case of Airport Management, Heidelberg, New York, Physica-Verlag, 2001
- Sydow, Jörg: Strategische Netzwerke: Evolution und Organisation, Wiesbaden, Gabler, 1992
- Töpfer, Armin: Strategische Marketing- und Vertriebsallianzen, in: Bronder, Christoph; Pritzl, Rudolf (Hrsg.): Wegweiser für strategische Allianzen: Meilen- und Stolpersteine bei Kooperationen, Frankfurt am Main, Frankfurter Allgemeine Zeitung, Zeitung für Deutschland; Wiesbaden, Gabler, 1992, pp. 173-208
- Tretheway, Michael W.: Airline Economics, Centre for Transportation Studies, University of British Columbia, Vancouver, 1992
- Weipert, Sven: Synergie und Einstellung, in: Hirzel, Leder & Partner (Hrsg.): Synergiemanagement: Komplexität beherrschen, Wiesbaden, Gabler, 1993, pp. 231-240
- Wells, Alexander T.: Air Transportation: a Management Perspective, 3rd edition, Belmont, Wadsworth Publishing Company, 1993
- Williams, George: The Airline Industry and the Impact of Deregulation, Hants/England, Ashgate, 1993
- Yin, Robert K.: Case Study Research - Design and Methods, 2nd edition, Newbury Park, California, Sage, 1994
- Yoshino, Michael Y.; Rangan, Srinivasa U.: Strategic Alliances: an Entrepreneurial Approach to Globalization, Boston/Massachusetts, Harvard Business School Press, 1995

## Doctoral Dissertations

- Altwegg, Roland: Strategiebewertung und Ermittlung des Synergiewertes bei Kooperationen - ein strategischer Kooperationsbewertungsansatz, Basel, Econom Druck AG, 1995
- Beyhoff, Stefan: Die Determinanten der Marktstruktur von Luftverkehrsmärkten, Universität Köln, 1995
- Bronder, Christoph: Unternehmensdynamisierung durch strategische Allianzen: ein konzeptioneller Ansatz zum Kooperationsmanagement, Universität St. Gallen, 1992
- Diegruber, Jürgen: Erfolgsfaktoren nationaler europäischer Linienluftverkehrsgesellschaften im Markt der 90er Jahre, Bamberg, Difo-Druck, 1991
- Grote, Birgit: Ausnutzung von Synergiepotentialen durch verschiedene Koordinationsformen ökonomischer Aktivitäten - Zur Eignung der Transaktionskostentheorie als Entscheidungskriterium, Frankfurt/Main, Bern, New York, Paris, Lang, 1990
- Hammes, Wolfgang: Strategische Allianzen als Instrument der strategischen Unternehmensführung, Wiesbaden, Gabler, Deutscher Universitäts-Verlag, 1994
- Hess, Markus: Strategisches Management der Unternehmensentwicklung von Regionalflyglinien, Bamberg, Difo-Druck, 1994
- Jäckel, Klaus: Kooperationsstrategien im Linienluftverkehr vor dem Hintergrund zunehmender Integrationsentwicklung, Bergisch-Gladbach, Köln, Eul, 1991
- Klanke, Burkhard: Kooperation als Instrument der strategischen Unternehmensführung, Universität Münster, 1995
- Krebs, Jürgen: Gestaltung von Synergien durch Kooperations- und Konzentrationsstrategien: eine interdisziplinäre Analyse ihrer Rechtsprobleme, Frankfurt/Main, Berlin, Bern, New York, Paris, Wien, Lang, 1996
- Netzer, Frithjof: Strategische Allianzen im Luftverkehr: nachfrageorientierte Problemfelder ihrer Gestaltung, Frankfurt/Main, Berlin, Bern, New York, Paris, Wien, Peter Lang, 1999
- Opitz, Michael: Der Einfluss der EG-Liberalisierung auf die Netzbildung im europäischen Luftverkehrssystem, Nürnberg, Gesellschaft für Verkehrsbetriebswirtschaft und Logistik (GVB), 1994



- Piepelow, Volker: Die europäischen Linienfluggesellschaften im Wettbewerb - eine Analyse mittels des Konzepts der "strategischen Gruppen", Frankfurt/Main, Berlin, Bern, New York, Paris, Wien, Lang, 1997
- Reckewerth, Sven: Die Zusammenarbeit der Luftverkehrsgesellschaften nach europäischem und US-amerikanischem Recht, Köln; Berlin, Bonn, München, Heymann, 1993
- Rodermann, Marcus: Strategisches Synergiemanagement, Wiesbaden, Deutscher Universitäts-Verlag, 1999
- Ropella, Wolfgang: Synergie als strategisches Ziel der Unternehmung, Berlin, New York, de Gruyter, 1989
- Rotering, Joachim: Zwischenbetriebliche Kooperation als alternative Organisationsform: Ein transaktionskostentheoretischer Erklärungsansatz, Stuttgart, Schaefer-Poeschel, 1993
- Sandler, Guido Georg Rudolf: Synergie: Konzept, Messung und Realisation - Verdeutlichung am Beispiel der horizontalen Diversifikation durch Aquisition, Bamberg, Difo-Druck, 1991
- Schierenbeck, Henner: Beteiligungsentscheidungen: betriebswirtschaftliche Grundlagen des Erwerbs und der Veräußerung von Unternehmungsbeteiligungen, Berlin, Duncker und Humblot, 1973
- Steininger, Andreas: Gestaltungsempfehlungen für Airline Allianzen, Bamberg, Difo-Druck, 1999
- Weber, Gerd: Erfolgsfaktoren im Kerngeschäft von europäischen Luftverkehrsgesellschaften, Bamberg, Difo-Druck, 1997
- Woerz, Claudia: Deregulierungsfolgen im Luftverkehr: Handlungsempfehlungen für Marktordnung und Umweltpolitik, Heidelberg, v. Decker, 1997
- Youssef, Waleed Ahmed Hafez: Causes and Effects of International Airline Equity Alliances, University of California, Berkley, 1992

## Company and Institutional Publications, and Conference Proceedings

- Accenture: Airport 2002 - Results of the Expert Inquiry on the Future of the European Airport Industry - Management Summary, Accenture, February, 2002
- Airbus Industrie: Global Market Forecast 2000-2019, Blagnac Cedex, Airbus Industrie, July, 2000
- Association of European Airlines: Airline Alliances and Competition in Transatlantic Airline Markets, Association of European Airlines, Aug 21, 1998
- Beyhoffs, Stefan; Ehmer; Hansjochen; Wilken, Dieter: Code-Sharing im internationalen Luftverkehr der Bundesrepublik Deutschland, Deutsche Forschungsanstalt für Luft- und Raumfahrt e.V.; Hauptabteilung Verkehrsforschung; Forschungsbericht 95-23, Köln, 1995
- Billing, Knut: European Air Transport Policies - the Need for a Truly "One Sky Europe", Report, Committee on Economic Affairs and Development, Doc. 8759, Strassbourg, Council of Europe, Parliamentary Assembly, June 7, 2000
- Bittlinger, Horst: 10 Jahre Liberalisierung des Luftverkehrs in Europa - Anmerkungen aus der Sicht der Fluggesellschaften, Schriftenreihe der Deutschen Verkehrswissenschaftlichen Gesellschaft e.V. - DVWG, 5. Luftverkehrsforum der DVWG; 10 Jahre Liberalisierung des Luftverkehrs - eine Bestandsaufnahme, Bergisch Gladbach, Deutsche Verkehrswissenschaftliche Gesellschaft e.V. -DVWG, 1998
- Boeing Commercial Airplane Group: Current Market Outlook 2000, Seattle, 2000
- Boeing Commercial Airplane Group: Current Market Outlook 2001, Seattle, 2001
- Brueckner, Jan K.: The Benefits of Codesharing and Antitrust Immunity for International Passengers, with an Application to the Star Alliance, University of Illinois, Urbana-Campaign, July, 2000
- Brueckner, Jan K.: The Economics of International Codesharing: an Analysis of Airline Alliances, University of Illinois, Urbana-Campaign, February, 2000
- Button, Kenneth: Interaction of Global Competition, Airline Strategic Alliances and Air Traffic Safety, International Aviation Safety Conference, Rotterdam, 1997, August 17-29
- Civil Aviation Authority: Slot Allocation: a Proposal for Europe's Airports, CAP 644, London, UK Civil Aviation Authority, 1995

- Deutsche Lufthansa Aktiengesellschaft: Weltluftverkehr, Lufthansa und Konkurrenz, Ausgabe 2001, Köln, 2001
- Deutsche Lufthansa Aktiengesellschaft: Weltluftverkehr, Lufthansa und Konkurrenz, Ausgabe 2000, Köln, 2000
- Deutsche Lufthansa Aktiengesellschaft: Weltluftverkehr, Lufthansa und Konkurrenz, Ausgabe 1996, Köln, 1996
- Deutsche Lufthansa Aktiengesellschaft: Weltluftverkehr, Lufthansa und Konkurrenz, Ausgabe 1994, Köln, 1994
- Economic Strategy Institute: Consolidation, Connectivity, Competition and Communities: The Advent of National Aviation Networks, Economic Strategy Institute, October, 2000
- Economic-Plus Limited GRA, Incorporated: an Economic Assessment of the IATA Interline System, October, 2000
- European Commission Directorate-General for Energy and Transport: EU Transport in Figures Statistical Pocket Book, Brussels, October, 2000
- European Commission: The Single Market Review: Impact on Services: Air Transport, Subseries II: Volume 2, European Commission, Luxembourg, London, Office for official Publications of the European Communities, Kogan Page, Earthscan, 1997
- European Union: Council Directive 96/97/EC of 15 October 1996 on Access to the Groundhandling Market at Community Airports, Official Journal, October 15, No. L272, 1996, pp. 36-45
- Global Aviation Associates: The History and Outlook for Travel Distribution in the PC-based Internet-Environment, Chicago, February, 2001
- Golaszewski, Richard S.; Spitz, William; Hogendoorn, Christian: Code Sharing, Gellman Research Associates, Transportation Advisor, August, Vol. 5, No. 1, 1995, pp. 1-4
- Howarth, Graham; Kirsebom, Thomas: The Future of Airline Alliance, Current Thinking, Strategic Directions, and Implications, Airline Business; Gemini Consulting, 2000
- International Air Transport Association (IATA): DG Competition Consultation Paper on IATA Passenger Tariff Conferences, International Air Transport Association, April 30, 2001
- International Air Transport Association (IATA): Jeanniot Sees Renewed Optimism in Air Traffic Forecast, Press Release, Geneva, IATA, October 4, 2000



- International Air Transport Association (IATA): Summer 2000 Air Traffic Control Delays - once again Totally Unacceptable, Press Release, Geneva, IATA, May 22, 2000
- International Organization for Standardization: Guidelines for Environmental Auditing - General Principles, Geneva, International Organization for Standardization, 1996
- International Organization for Standardization: Guidelines for Environmental Auditing - Audit Procedures - Auditing of Environmental Management System, Geneva, International Organization for Standardization, 1996
- Köhne, Anne-Lore: Erwartungen des privaten Kunden an den Luftverkehr von Morgen, Schriftenreihe der Deutschen Verkehrswissenschaftlichen Gesellschaft e.V. - DVWG, 4. Luftverkehrsforum der DVWG; Der Luftverkehr von Morgen - seine Anforderungen und Notwendigkeiten, Bergisch Gladbach, Deutsche Verkehrswissenschaftliche Gesellschaft e.V. - DVWG, 1997
- Leibold, Marius; Gibbert, Michael; Kaes, Barbara: The Knowledge Dilemma in Corporate Strategic Alliances: a Review of Current Theory and a Reconceptualisation to Guide Future Research, Stellenbosch University, 2000
- Leibold, Marius; Slabbert, Nicholas J.: Key political-economy Pointers for Designing and Managing sStrategic Alliances in Regional Business Environments, Best Paper Award, Third Annual World Business Congress, Penang, 1994, June 16-18
- Merrill Lynch & Co.: Global Airline Benchmark, Merrill Lynch & Co. Global Securities Research & Economics Group, Global Fundamental Equity Research Department, March 27, 2000
- Merrill Lynch, Pierce, Fenner & Smith Inc.: Global Airline Alliances, Merrill Lynch, Pierce, Fenner & Smith Inc. Global Securities Research & Economics Group, Global Fundamental Equity Research Department, June 7, 1999
- N/A: Airline Strategic Alliances: Definition and a Case for Caution, Gellman Research Associates, Transportation Advisor, January, Vol. 3, No. 1, 1993, pp. 1-5
- N/A: Convention on International Civil Aviation, signed at Chicago on 7 December 1944 (Chicago Convention), 1944
- N/A: Lufthansa: The Challenge of Globalisation, London Business School, October, 1996

- Niejahr, Michael: 10 Jahre Liberalisierung des Luftverkehrs in Europa - Neue Herausforderungen an Industrie und Politik, 5. Luftverkehrsforum der DVWG; 10 Jahre Liberalisierung des Luftverkehrs - eine Bestandsaufnahme, Bergisch Gladbach, Deutsche Verkehrswissenschaftliche Gesellschaft e.V. -DVWG, 1998
- Preussag AG: Preussag - a Brief Look at Europe's Leading Tourism Group, Hannover, Preussag AG Konzernkommunikation, 2001
- Rolls-Royce: Major Aircraft Market Outlook 1998-2017, Derby, Rolls-Royce plc, 1999
- SH&E: Alliance Impacts on Maintenance and Engineering, The Eighth Annual Airline Inventory, Component Management & Overhaul Conference, Amsterdam, 1999 November 9-11
- Stragier, Joos: Presentation for Panel Discussion "Current Issues arising with Airline Alliances", 11th Annual Conference, Recent Developments in European Air Transport Law and Policy, Lisbon, 1999, November 5
- The Commission of the European Communities: Commission Regulation (EC) No 3652/93 of 22 December 1993 on the application of Article 85 (3) of the Treaty to certain categories of agreements between undertakings relating to computerized reservation systems for air transport services, Official Journal, Brussels, The European Commission, December 31, No. L333, 1993, pp. 37-44
- The European Commission: Commission Notice Concerning the Alliance Agreements between Delta, Sabena, Swissair and Austrian Airlines, Official Journal of the European Communities, Brussels, The European Commission, October, 96/C 289/05, 1996, pp. 6-7
- The European Commission: Commission Notice Concerning the Alliance Agreements between British Airways and American Airlines, Official Journal of the European Communities, Brussels, The European Commission, October, 96/C 289/04, 1996, pp. 4-5
- The European Commission: Commission Notice Concerning the Lufthansa, United Airlines and Scandinavian Airlines System Alliances, Official Journal of the European Communities, Brussels, The European Commission, October, 96/C 289/06, 1996, pp. 8-13
- The European Commission: Commission Refers Eight Member States who Have Signed Bilateral Air Transport Agreements with the United States to the European Court of Justice, Press Release IP/98/966, Brussels, The European Commission, November 5, 1998

- The European Commission: Notice Pursuant to Article 16(3) of Council Regulation (EEC) No. 3975/87 of 14 December 1987 Concerning Case IV/37.730 - Austrian Airlines Österreichische Luftverkehrs AG/Deutsche Lufthansa AG, Official Journal of the European Communities, Brussels, The European Commission, December 14, C 356, 2001, pp. 5-8
- Turnbull, Peter: Regulation, Deregulation or Re-regulation of Transport, International Labour Organisation: Symposium on the Social and Labour Consequences of Technological Developments, Deregulation and Privatisation of Transport, Geneva, 1999 September 20-24
- United States Department of Transportation: Code-share Safety Program Guidelines, Washington, U.S. Department of Transportation, February, 2000
- United States Department of Transportation: International Aviation Developments, Second Report: Transatlantic Deregulation, the Alliance Network Effect, Washington, U.S. Department of Transportation, October, 2000
- United States Department of Transportation: International Aviation Developments: Global Deregulation takes off (First Report), Washington, U.S. Department of Transportation, December, 1999
- United States Department of Transportation: Statement of the Honourable Kenneth M. Mead, Inspector General, U.S. Department of Transportation before the Committee on Commerce, Science, and Transportation U.S. Senate, Washington, U.S. Department of Transportation, July, 2000
- United States Department of Transportation: Testimony of Jeffrey G. Katz before the Committee on Commerce, Science, and Transportation, U.S. Senate, Washington, U.S. Department of Transportation, July, 2000
- United States General Accounting Office: Airline Alliances Produce Benefits, but Effects on Competition is Uncertain, Washington, United States General Accounting Office, April, 1995
- United States General Accounting Office: Airline Deregulation: Changes in Airfares, Service, and Safety at Small, Medium-sized, and Large Communities, GAO/RCED-96-79, Washington, United States General Accounting Office, Apr 19, 1996



- United States General Accounting Office: Domestic Aviation: Barriers to Entry Continue to Limit Benefits of Airline Deregulation, GAO/T-RCED-97-120, Washington, United States General Accounting Office, May 13, 1997
- United States General Accounting Office: International Aviation Alliances and the Influence of Airline Marketing Practices, GAO/T-RCED-98-131, Washington, United States General Accounting Office, March, 1998
- United States General Accounting Office: International Aviation: Competition Issues in the U.S.-U.K. Market, GAO/T-RCED-97-103, Washington, United States General Accounting Office, June, 1997
- United States General Accounting Office: Proposed Domestic Airline Alliance Raise Serious Issues, GAO/T-RCED-95-215, Washington, United States General Accounting Office, June, 1998

## Online Publications

- European Commission, Directorate-General for Energy and Transport: Rights in the European Union: a Consultation Document on Consumer Protection in Air Transport, European Commission, <http://www.irlgov.ie/tec/aviation/consdoc.htm>, 2000, site accessed 14.11.00
- Hulley, Mike: The Impact of E-Marketplaces up the Airline Industry, RMR plc Conference Paper, <http://www.rmr-aviation2001.com>, 2001, site accessed 30.03.01
- N/A: 2001 Fall in Traffic First since 1991, IATA, [http://www.iata.org/air/Air\\_13.htm](http://www.iata.org/air/Air_13.htm), 2002, February 5, site accessed 05.02.02
- N/A: About Us, Worldspan, <http://www.worldspan.com/home.asp?PageID=5>, 2002, site accessed 12.01.02
- N/A: Air France Expects Big Competition from TGV Rail Link, Air Transport World, <http://atwonline.com/indexfull.cfm?newid=705>, 2001, May 28, site accessed 28.05.01
- N/A: Airbus Outsell Boeing in 2001, Air Transport World, <http://www.atwonline.com/indexfull.cfm?newsid=1465>, 2002, January 10, site accessed 10.01.02
- N/A: Airinfo Alliance: Destinations, Airinfo, [http://195.129.34.239/bincgi/broker\\_v8](http://195.129.34.239/bincgi/broker_v8), 2001, site accessed 15.02.02

- N/A: Airinfo Alliance: General, Airinfo, [http://195.129.34.239/bin/cgi/broker\\_v8](http://195.129.34.239/bin/cgi/broker_v8), 2002, site accessed 15.02.02
- N/A: Annual Airline Expenditure on Inflight Entertainment and Communication, WAEA (World Airline Entertainment Association), <http://www.waea.org/inflight/expenditure.ctm>, 2001, site accessed 09.07.01
- N/A: BARIG Resolution: European Air Transport Policy and Airline Alliances, BARIG, <http://www.barig.org/ep980925>, 1998, September, site accessed 13.10.00
- N/A: British Airways' Extended Network - Franchise Carriers, British Airways, <http://british-airways.com/inside/wrldwide/partners/franch.shtml>, 2001, site accessed 21.08.01
- N/A: Consumer Groups Come out against Airlines' Orbitz Project, Airwise News, <http://news.airwise.com/stories/2001/04/986840807.html>, 2001, Apr 09, site accessed 10.04.01
- N/A: Global Airline Industry in Trouble?, Airwise News, <http://news.airwise.com/stories/2002/02/1012915396.htm>, 2002, February 5, site accessed 05.02.02
- N/A: Inflight Catering Market - The Vital Statistics, IFCA (International Flight Catering Association), <http://www.ifcanet.com>, 2001, site accessed 09.07.01
- N/A: Investors, Amadeus, <http://www.amadeus.com/en/40/40.jsp>, 2002, site accessed 12.01.02
- N/A: Lufthansa / Eurowings Cleared Subject to Obligations, Bundeskartellamt, [http://www.bundeskartellamt.de/24\\_09\\_2001\\_englisch.html](http://www.bundeskartellamt.de/24_09_2001_englisch.html), 2001, Sep 24, site accessed 23.11.01
- N/A: Lufthansa / Eurowings: Kartellamt segnet Fusion unter Auflagen ab, Financial Times Deutschland, <http://www.ftd.de/ub/diFTD4VSJQZRC.html>, 2001, Sep 24, site accessed 23.11.01
- N/A: Lufthansa AG - Investor Relations - the Company, Deutsche Lufthansa AG, [http://www.lufthansa-financials.de/english/ir/company/star\\_b.htm](http://www.lufthansa-financials.de/english/ir/company/star_b.htm), 2000, site accessed 02.08.01
- N/A: Lufthansa will die Fluglinie an der Spitze bleiben, Wirtschaftswoche heute - News, [http://wiwo.de/WirtschaftsWoche/Wiwo\\_CDA/0,1702,11217\\_51422;00.html](http://wiwo.de/WirtschaftsWoche/Wiwo_CDA/0,1702,11217_51422;00.html), 2000, site accessed 29.11.01

- N/A: Luftverkehrsabkommen - Deutsches Verhandlungsmuster, <http://www.luftrecht-online.de/bmfvbw/lvamuster.htm>, 2000, site accessed 23.10.00
- N/A: Our History, Galileo, <http://www.galileo.com/about/abghis.htm>, 2000, site accessed 11.01.01
- N/A: Pressemeldung de Bundeskartellamtes vom 06.03.2001: Bundeskartellamt mahnt Zusammenschluss von Lufthansa und Eurowings ab, Bundeskartellamt, [http://www.bundeskartellamt.de/06\\_03\\_2001.htm](http://www.bundeskartellamt.de/06_03_2001.htm), 2001, site accessed 19.10.01
- N/A: Sabre Milestones, Sabre, <http://www.sabre.com/about/history>, 2000, site accessed 11.01.01
- N/A: Star Alliance - what's New, Star Alliance, [http://www.star-alliance.com/isroot/SA/htmen/0\\_2-08-01-2000a.htm](http://www.star-alliance.com/isroot/SA/htmen/0_2-08-01-2000a.htm), 2000, site accessed 19.09.01
- N/A: Tarifklauseln im internationalen Luftverkehr, Luftrecht Online, <http://www.luftrecht-online.de/einzelheiten/verkehr/tarife>, 2000, site accessed 23.10.00
- N/A: Team Partners, Deutsche Lufthansa AG, [http://www.lufthansa.com/dlh/en/htm/team\\_lh/partner.html](http://www.lufthansa.com/dlh/en/htm/team_lh/partner.html), 2001, site accessed 18.10.01
- N/A: Thomas Cook - Unternehmensportrait, Thomas Cook AG, <http://53.122.207.14/cun/de/press/0,2448,0-4-29046,00.html>, 2001, site accessed 15.10.01
- SITA: Airlines Look to Rule Online Travel Market, <http://www.sita.com/pressreleases>, Press Release, SITA, July 26, 2000